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# A NEW TOOL FOR COMPUTING GALOIS GROUPS AND GALOIS IDEALS

SÉBASTIEN ORANGE, GUÉNAËL RENAULT, ANNICK VALIBOUZE

## Abstract

In this paper, we study some relations between univariate polynomials and their Galois group. It is presented in the form of tables, called "splitting tables". We show how these tables occur in factorizations over algebraic extensions, in the determination of Galois groups, in the computation of roots fields and in the computation of polynomials with given Galois group and coefficients in a number field.

## 1. INTRODUCTION

Let  $f$  be an irreducible polynomial of degree  $n > 1$  with coefficients in a perfect field  $k$ . We denote by  $\text{Gal}_k(f)$  the Galois group of  $f$  over  $k$ . The polynomial  $f$  being irreducible, its Galois group is a transitive subgroup of  $S_n$ , the symmetric group of degree  $n$ .

There are algorithms that factorize  $f$  over  $K = k(\alpha)$ ,  $\alpha$  a root of  $f$  (see [5], [16],[21]). We show that the degrees and Galois groups of the irreducible factors of  $f$  over  $K$  depend only on  $\text{Gal}_k(f)$  (Proposition 3.1). Then factorization  $f$  over  $K$  gives information on the Galois group of  $f$  over  $k$  and *vice versa*. By this way, our work can be seen as an extension of Soicher and McKay paper (see [19]) since we consider not only the degrees of the factors but also their Galois group and its applications. These informations are collected by the means of tables called *splitting tables*.

Splitting tables are described in section 2. In section 3, we explain the links between the splitting tables and the Galois group of polynomials. The section 4 contains the central contribution of this paper: *the applications of these tables*. In section 4.1 we show how these tables can be used for the determination of the Galois group. The section 4.2 is devoted to application for the factorization of a polynomial over one of its root field (a simple algebraic extension generated by **one** root of the polynomial) and we show in section 4.3 how this principle can be inductively applied for the computation of the roots field (the algebraic extension generated by **all** the roots of the polynomial). The section 4.4 presents application for the determination of polynomials with a given Galois group and coefficients in a number field. Splitting tables up to degree 21 are joined in the last section.

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## 2. SPLITTING TABLES

This part collects all theoretical results for the construction of the central object of this article: the *splitting tables*.

### 2.1. Notation.

The following notations will be used:

- Following Butler and McKay (see [8] and [12]), let  $nT_i$  be the  $i$ -th group of the list  $\mathcal{T}(n)$  of the transitive permutation groups of degree  $n$  (one for each conjugacy class of  $S_n$ ).
- $\ll$  is the order relation on transitive groups defined by:

$$dT_i \ll mT_j \text{ if } \begin{cases} d < m \\ \text{or} \\ d = m \text{ and } i \leq j. \end{cases}$$

- For each part  $\mathcal{O}$  of the set  $\{1, \dots, n\}$ , we denote by  $S_{\mathcal{O}}$  the symmetric group of degree  $\text{Card}(\mathcal{O})$  acting on  $\mathcal{O}$ .
- For  $G$  a subgroup of  $S_n$  and  $i \in \{1, \dots, n\}$ , let  $\text{Stab}_{\{i\}}(G)$  be the subgroup of the permutations of  $G$  fixing  $i$ .

### 2.2. Definition of splitting tables.

Fix a subgroup  $G$  of  $S_n$  and consider the set of orbits  $\mathcal{O}(G)$  of  $\{1, \dots, n\}$  under the natural action of  $\text{Stab}_{\{1\}}(G)$ .

For each orbit  $\mathcal{O} \in \mathcal{O}(G)$ , the transitive action of  $\text{Stab}_{\{1\}}(G)$  over  $\mathcal{O}(G)$  is identified to the one of a subgroup  $G_{\mathcal{O}}$  of  $S_{\mathcal{O}}$  contained in the set of representatives  $\mathcal{T}(\text{Card}(\mathcal{O}))$ .

- We denote by  $S(G)$  the finite sequence of groups  $G_{\mathcal{O}}$  where  $\mathcal{O}$  varies over  $\mathcal{O}(G)$ . In  $S(G)$  the groups are ordered by  $\ll$  increasing order.
- We denote by  $D(G)$  the degree sequence of the groups of the list  $S(G)$  (i.e. the cardinality of the orbits  $\mathcal{O}(G)$  ordered in increasing order).

The table collecting the sequences  $S(G)$  where  $G$  runs over  $\mathcal{T}(n)$  is called *the splitting table of degree  $n$* .

For each group  $G$  of the splitting table, we add some additional informations, i.e. the sequence  $D(G)$  and a list  $\mathcal{L}(G)$  described below (see also [4]).

- Let  $(L_i)_{1 \leq i \leq n+1}$  be the sequence defined inductively by:  $L_1 = G$  and, for  $i \in \llbracket 1, n \rrbracket$ ,

$$L_{i+1} = \text{Stab}_{\{i\}}(G) \cap L_i \quad .$$

- Let  $\mathcal{L}(G)$  be the list  $[d_1 = n, \dots, d_n = 1]$  defined by

$$d_i = \text{Card}(L_i) / \text{Card}(L_{i+1}) \quad .$$

*Remark 2.1.* Let  $G'$  be a conjugate of  $G$  in  $S_n$ . We have  $S(G) = S(G')$  and  $D(G) = D(G')$ . The list  $\mathcal{L}(G')$  is not necessarily equal to  $\mathcal{L}(G)$ . In the splitting tables, for each group  $G$  considered, we choose the list  $\mathcal{L}(G)$  defined as above for the representative presents in the list.

### 2.3. Construction of the splitting tables.

The tables have been generated by using the computer algebra system MAGMA (see [7]) in which we have implemented the functions computing the list  $\mathcal{L}(G)$  and the sequences  $S(G)$  and  $D(G)$  described in Section 2.2. The data base of groups of  $\mathcal{T}(m)$  for  $m \leq 23$  is included in MAGMA. Such an implementation is also possible with the computer algebra system GAP (see [10])

The exponential notation is used. For example:

- the sequence 1, 1, 1, 1, 2, 3, 3, 3, 4, 4 is represented by  $1^4, 2, 3^3, 4^2$  ;
- the sequence  $1T_1, 2T_1, 2T_1, 4T_2, 4T_3, 4T_3, 4T_3$  is represented by  $1T_1, 2T_1^2, 4T_2, 4T_3^3$ .

Each row of the splitting table of degree  $n$  corresponds to a group  $G = nT_i$  of  $\mathcal{T}(n)$ . An exponent + appears if  $G$  is even and an exponent \* if  $G$  is solvable. The rows of the tables are ordered according to the following rule: for two groups  $G$  and  $H$  of  $\mathcal{T}(n)$ ,

- if  $S(G) \neq S(H)$ , the row corresponding to  $G$  comes before the one for  $H$  if  $S(G)$  is smaller than  $S(H)$  for the lexicographic order induced by the order  $\ll$ ;
- if  $S(G) = S(H)$ , the row corresponding to  $G$  comes before the one of  $H$  if  $G \ll H$ .

*Example 2.2.* We now show how to construct the table in degree 3; we have two transitive groups  $3T_1 = A_3$  and  $3T_2 = S_3$ .

In the case of  $3T_1$ , the action of  $\text{Stab}_{\{1\}}(3T_1)$  on the set  $\{1, 2, 3\}$  has three orbits; therefore, the action is trivial and we have  $D(3T_1) = 1^3$  and  $S(3T_1) = 1T_1, 1T_1, 1T_1$ .

In the case of  $3T_2$ , the orbits of the action of  $\text{Stab}_{\{1\}}(3T_2)$  on  $\{1, 2, 3\}$  are  $\{1\}$  and  $\{2, 3\}$ . The action of this group on the second orbit is the same as that of  $2T_1$ . Thus we obtain  $D(3T_2) = 1, 2$  and  $S(3T_2) = 1T_1, 2T_2$ .

## 3. SPLITTING TABLES AND GALOIS GROUPS

When a group  $G$  is the Galois group of a polynomial  $f$  it is natural to look for a correspondance between  $G$  and  $f$ . This is the subject of this section.

### 3.1. Relations ideals and Galois groups.

Let  $f$  be an irreducible polynomial of degree  $n$ .

Let  $\underline{\alpha} = (\alpha_1, \alpha_2, \dots, \alpha_n)$  be an  $n$ -tuple of the  $n$  distinct roots of  $f$ , and let  $x_1, x_2, \dots, x_n$  be algebraically independent variables. The ideal

$$\mathcal{M} = \{R \in k[x_1, x_2, \dots, x_n] \mid R(\underline{\alpha}) = 0\}$$

is called the *ideal of the  $\underline{\alpha}$ -relations* (over  $k$ ). The evaluation  $x_i \mapsto \alpha_i$  induces a morphism  $k[x_1, x_2, \dots, x_n]$  onto  $k(\underline{\alpha})$  whose kernel is  $\mathcal{M}$ . Thus:

$$k(\underline{\alpha}) \simeq k[x_1, x_2, \dots, x_n]/\mathcal{M}.$$

The *Galois group  $G_{\underline{\alpha}}$  of  $\underline{\alpha}$  over  $k$*  is defined by:

$$G_{\underline{\alpha}} = \{\sigma \in S_n \mid \forall R \in \mathcal{M}, R(\alpha_{\sigma(1)}, \alpha_{\sigma(2)}, \dots, \alpha_{\sigma(n)}) = 0\}.$$

This group is isomorphic to the Galois group  $Gal_k(f)$  defined as the group of the  $k$ -automorphisms of the roots field  $k(\underline{\alpha})$  of  $f$ .

Any relations ideal of the polynomial  $f$  is, for a permutation  $\rho \in S_n$ , the set of all polynomials vanishing on  $\rho.\underline{\alpha}$ . The Galois group of  $\rho.\underline{\alpha}$  over  $k$  is the conjugate  $\rho^{-1}G_{\underline{\alpha}}\rho$  of  $G_{\underline{\alpha}}$ .

In next sections,  $G_f$  will denote the conjugate of  $G_{\underline{\alpha}}$  belonging to  $\mathcal{T}_n$ .

### 3.2. Degrees and Galois groups of the splitting factors.

The  $s > 1$  irreducible factors  $g_1(\alpha_1, X) = X - \alpha_1, g_2(\alpha_1, X), \dots, g_s(\alpha_1, X)$  of  $f$  over  $K = k(\alpha_1)$  will be called the *splitting factors* of  $f$ , and will be listed in increasing order of their degrees.

For all  $i \in \llbracket 1, s \rrbracket$ , the Galois group of  $g_i$  over  $K$  is isomorphic to a group  $G_i$  of  $\mathcal{T}(\deg_X(g_i))$ . We complete the order of the polynomials  $g_i$  as follows:  $g_i < g_j$  if  $G_i \ll G_j$ .

The sequence  $D(f) = \deg_X(g_1), \dots, \deg_X(g_s)$  is called the *sequence of the splitting degrees* of  $f$  and the sequence  $S(f) = G_1, \dots, G_s$  is called the *sequence of the splitting groups* of  $f$ .

**Proposition 3.1.** *We have:*

$$S(f) = S(G_f).$$

*This means that the Galois groups over  $K$  of the splitting factors of  $f$  are the groups of the sequence  $S(G_f)$  only depending on the Galois group of  $f$  over  $k$ .*

*Démonstration.* Let  $M$  be an extension of  $k$  and  $g$  be an irreducible factor of  $f$  on  $M$ . Denote by  $\mathcal{O}_f$  (resp.  $\mathcal{O}_g$ ) the roots set of  $f$  (resp.  $g$ ) in an algebraic closure of  $k$  containing  $M$ . As  $g$  is irreducible over  $M$ , the classical Galois theory assure that the set  $\mathcal{O}_g$  is the  $Aut_M(M(\mathcal{O}_f))$ -orbit of any root of  $g$ .

Any automorphism of  $Aut_M(M(\mathcal{O}_g))$  can be lifted to an automorphism of  $Aut_M(M(\mathcal{O}_f))$ , thus the restriction homomorphism

$$\begin{aligned} Aut_M(M(\mathcal{O}_f)) &\longrightarrow Aut_M(M(\mathcal{O}_g)) \\ \sigma &\longmapsto \sigma|_{M(\mathcal{O}_g)} \end{aligned}$$

is surjective. Consequently, the action of  $Aut_M(M(\mathcal{O}_f))$  on  $\mathcal{O}_g$  is the same that the one of  $Aut_M(M(\mathcal{O}_g))$  on  $\mathcal{O}_g$  which gives, after an indexation of the roots, the symmetric representation of its Galois group.

In the case of  $M = K = k(\alpha_1)$ , this result proves that  $G_g$  is one of the groups of  $S(G)$ . Conversely, a group of  $S(G)$  corresponds to a unique orbit of the action  $Stab_G(1)$  over  $\{1, \dots, n\}$  which corresponds to a subset  $\mathcal{O}$  of  $\mathcal{O}_f$ . The classical Galois theory insures

that  $\mathcal{O}$  is the set of all the conjugates of one of its elements. Thus, the minimal polynomial of one element of  $\mathcal{O}$  over  $K$  is a factor of  $f$ . The equality  $S(f) = S(G_f)$  follows.  $\square$

*Remark 3.2.* As a direct consequence of Proposition 3.1 we have the equality  $D(f) = D(G_f)$ . This equality can be refound (up to a constant factor) with the part of McKay and Soicher's table (see [19]) concerning linear resolvents with invariant of the form  $x_1 + \lambda x_2$ ,  $\lambda \in k$ .

### 3.3. Initial degrees of the maximal relations ideals.

The ideal of polynomials vanishing at  $\sigma.\underline{\alpha}$ , for all  $\sigma \in S_n$ , is the *ideal of symmetric relations between the roots of  $f$* . It is generated by a triangular set of polynomials called *Cauchy modules* (see [20] and [18]). Let  $I$  be an ideal containing that of symmetric relations and generated by a triangular set  $\{f_1(x_1) = f(x_1), f_2(x_1, x_2), \dots, f_n(x_1, \dots, x_n)\}$ . The list of initial degrees is given by:

$$\mathcal{L}(I) = [\deg_{x_1}(f_1), \deg_{x_2}(f_2), \dots, \deg_{x_n}(f_n)].$$

The maximal ideal  $\mathcal{M}$  of Section 3.1 is triangular (see [20] and [4]). As stated in the next proposition, its list of initial degrees only depends on the Galois group  $G_{\underline{\alpha}}$ .

**Proposition 3.3.** (See [4]). *The list  $\mathcal{L}(\mathcal{M})$  is equal to the list  $\mathcal{L}(G_{\underline{\alpha}})$  defined in Section 2.2.*

## 4. APPLICATIONS

In this section we present a few applications using the splitting tables.

### 4.1. Determination of the Galois group.

By Proposition 3.1 the Galois group is one of the groups  $H$  of the set  $\mathcal{T}(n)$  satisfying  $S(H) = S(f)$ . We call *candidate groups* those for which  $D(H) = D(f)$ .

The list  $D(f)$  is known once the factorization of  $f$  over  $K$  has been carried out. If there is only one candidate group  $H$ , or if only one of the candidate groups  $H$  satisfies  $S(f) = S(H)$ , then we know that  $H = G_f$ . In order to determine which are the candidate groups  $H$  such that  $S(f) = S(H)$ , it is not always necessary to determine the entire sequence  $S(f)$ . The determination of some Galois groups of the splitting factors of  $f$  may be sufficient (see Example 4.2). Other effective methods may then be applied in order to complete this search. For instance, the factorization of  $f$  modulo a prime not dividing the discriminant (see [8] and [14]), or the exploitation of the parity of the Galois group of  $f$ .

The following examples refer to the splitting tables.

*Example 4.1.* When the Galois groups  $G_f$  is one of the groups  $6T_5$ ,  $7T_4$ ,  $10T_6$ ,  $13T_5^+$ ,  $14T_8$ ,  $14T_{16}$ ,  $15T_2$ ,  $15T_6^+$ ,  $15T_7$ , the computation of  $D(f)$  is sufficient for its determination.

*Example 4.2.* If an irreducible polynomial  $f$  of degree 15 satisfy  $D(f) = 1, 2, 4, 8$  then, from the splitting table of degree 15, we know that its Galois group is one of the groups  $15T_{10}^+$ ,  $15T_{11}$ ,  $15T_{22}^+$ ,  $15T_{23}$  or  $15T_{29}$ . The determination of the Galois group over  $k(\alpha_1)$  of the splitting factor of degree 4 is sufficient for determining the Galois group of  $f$ .

*Example 4.3.* If an irreducible polynomial  $f$  of degree 15 is such that  $D(f) = 1, 4, 5^2$ , and if the discriminant of one of its splitting factors of degree 5 is a square in the  $k(\alpha_1)$ , then the Galois group of  $f$  is  $15T_{92}^+$ .

*Example 4.4.* If an irreducible polynomial of degree 9 is such that  $D(f) = 1, 2, 3^2$ , the list of the candidate groups are  $9T_{13}$ ,  $9T_{22}$ ,  $9T_{25}^+$  and  $9T_{28}$ .

*Example 4.5.* If the degree of an irreducible polynomial  $f$  is 16 and  $D(f) = 1^8, 8$ , there are three candidate groups. If, in addition, the discriminant of  $f$  shows that the Galois group is odd then, by using the splitting table for the degree 16, we know that  $G_f = 16T_{289}$ .

*Example 4.6.* If  $f$  is of degree 15 and  $D(f) = 1, 2, 3^4$  then the Galois group  $f$  is one of the following groups:  $15T_{33}$ ,  $15T_{44}$ ,  $15T_{71}^+$  and  $15T_{81}$ . The determination of  $S(f)$  is not sufficient to distinguish them. If  $G_f$  is odd, three groups are left. In such a case, the splitting tables are not sufficient for the determination of all the Galois groups.

*Example 4.7.* Suppose that  $f$  splits into linear factors over  $K$  (i.e.  $D(f) = 1^n$ ). If, as in degree 4, there are many candidate groups, one can nevertheless distinguish them. Actually, for  $\underline{\alpha}$  such that  $g_i(\alpha_1, \alpha_i) = 0$ , the ideal generated by the triangular set:

$$f(x_1), g_2(x_1, x_2), \dots, g_n(x_1, x_n)$$

is the ideal  $\mathcal{M}$  of the  $\underline{\alpha}$ -relations, and the Galois group of  $\underline{\alpha}$  over  $k$  is the decomposition group of this ideal (see [1] for the determination of this group).

#### 4.2. Factorization of polynomials in their root field.

The splitting table for a given degree  $n$  gives the set  $\mathcal{D}(n)$  of the lists of the degrees of the possible splitting factors of an irreducible polynomial  $f$  of degree  $n$ . Therefore, when factorizing in the root field, the search for possible factors can be restricted to the ones whose list of the degrees is contained in  $\mathcal{D}(n)$ . In this way, one can avoid useless calculations in the classical factorization algorithms by using an interactive algorithm (e.g. see [13]).

*Example 4.8.* The number of elements of the set  $\mathcal{D}(7)$  is a priori bounded by the number of partitions of 6, i.e. 11. The table for the degree 7 gives the exact value:  $|\mathcal{D}(7)| = 4$ . In this way a great number of combinations of possible factors in an algorithm of modular factorization can be avoided. Clearly, if some informations on the Galois group are available, the possible degrees of the factors can be restricted to a subset of  $\mathcal{D}(n)$ .

#### 4.3. Determination of the roots field of a polynomial.

The determination of the roots field of  $f$  is equivalent to the determination of a triangular set  $S_{\mathcal{M}}$  of polynomials generating a maximal relations ideals  $\mathcal{M}$  of  $f$ .

The most ancient method consists in factoring  $f$  in its algebraic extensions (see [20] and [2]). This method can be improved by using the splitting tables as a guide for the factorisations. Indeed, we just have to apply recursively the approach of section 4.2.

Another method for the determination of  $S_{\mathcal{M}}$  consists in the construction of an ascending chain of ideals starting from an ideal containing the symmetric relations between the roots of  $f$  and ending with  $\mathcal{M}$  (see the `GaloisIdeal` algorithm in [22]). In [17],

it is shown how to improve this method by associating with it the factorization in the extensions and by making use of the splitting tables (see Remark 4.9).

Let  $I$  be an ideal containing symmetric relations generated by a triangular set  $S_I = \{f_1(x_1) = f(x_1), f_2(x_1, x_2), \dots, f_n(x_1, \dots, x_n)\}$  of polynomials vanishing on  $\underline{\alpha}$ , and let  $m_i = \deg_{x_i}(f_i)$  for  $i = 1, 2, \dots, n$ . Assume that the polynomials of  $S_I$  are known and that the ideal  $\mathcal{M}$  vanish on  $\underline{\alpha}$ . We want to find the generating set  $\mathcal{S}_{\mathcal{M}}$ .

The list  $\mathcal{L}(\mathcal{M}) = [d_1, d_2, \dots, d_n]$  equals  $\mathcal{L}(G_{\underline{\alpha}})$  (see Proposition 3.3). Suppose that the list  $\mathcal{L}(G_{\underline{\alpha}})$  is known by the way of some informations on the Galois group of  $f$ . This is the case, for instance, when one knows that the Galois group  $G_{\underline{\alpha}}$  belongs to a known list of groups  $H$  having identical lists  $\mathcal{L}(H)$ . We show below how the search of  $\mathcal{S}_{\mathcal{M}}$  is simplified.

Actually, since  $I$  is included in  $\mathcal{M}$  we have

$$d_i \leq m_i, \quad i = 1, 2, \dots, n.$$

The comparison of the list  $\mathcal{L}(I)$  with  $\mathcal{L}(G_{\underline{\alpha}})$  yields the following result:

- 1- we have  $d_i = m_i$  if and only if one can choose the  $i$ -th polynomial of the set  $S_I$  to be the  $i$ -th polynomial of the set  $\mathcal{S}_{\mathcal{M}}$ ;
- 2- if  $d_i < m_i$ , then the  $i$ -th polynomial of the set  $\mathcal{S}_{\mathcal{M}}$  is a factor of the  $i$ -th polynomial of the set  $S_I$  considered as a polynomial of the ring  $k(\alpha_1, \dots, \alpha_{i-1})[x]$ .

For the determination of the missing polynomial of the set  $\mathcal{S}_{\mathcal{M}}$  it is possible to apply the methods already referred (factorization in algebraic extensions, `GaloisIdeal` algorithm) or some particular results (see for instance [15] where an interpolation method is given for the case  $d_i = 1$ .) enlightened by this additional information.

*Remark 4.9.* A system of generators of an ideal  $I$  contained in the relations ideal  $\mathcal{M}$  can be constructed from the sequence  $f_1(x_1), g_2(x_1, x), \dots, g_s(x_1, x)$  in which the polynomial  $g_1(x_1, x) = x - x_1$  is missing. The procedure consists in replacing inductively each polynomial  $g_i$  of the sequence with its Cauchy modules, paying attention that the introduced variables do not yet appear in the polynomials of the new sequence under construction. The ideal obtained by this way is called the *start ideal of the polynomial*  $f$  (see [17]).

*Example 4.10.* Consider again the example 4.1. The list of the degrees of the set of generators of the start ideal of  $f$  is  $[16, 8, 7, 6, 5, 4, 3, 2, 1^8]$ . The splitting table for the degree 16 shows that  $\mathcal{L}_{\mathcal{M}} = [16, 8, 1^{14}]$  (in this particular case, the initial degrees of any relations ideals of  $f$  are the same ; i.e. the list  $\mathcal{L}$  is independent of the representant of the  $S_n$ -conjugacy class of any candidate group). If we compare these two lists we know that we will find a relations ideal if we replace in the start ideal of  $f$  the Cauchy modules of the factor  $g_8$  of degree 8 (except for the polynomial  $g_8$  itself) with linear relations of the form  $x_i + g_i(x_1, x_8)$ , for  $i \in \llbracket 10, 16 \rrbracket$ .

*Remark 4.11.* A recursive utilization of splitting tables by factoring  $f$  in extensions would need to establish splitting tables for non transitive subgroups of  $S_n$ . Actually, the Galois group of a non irreducible polynomial without multiple roots is a subgroup of the direct product of the Galois groups of the factors.



#### 4.4. Polynomials with given Galois groups in algebraic extensions.

Let  $H$  be a transitive subgroup of  $S_r$ . The splitting tables allow the search of polynomials with coefficients in an algebraic extension with  $H$  as Galois group. Suppose that, for some  $n$ , there exists a subgroup  $G$  of  $S_n$  such that the group  $H$  appears in the sequence  $S(G)$ .

Suppose that we know a polynomial  $f \in k[x]$  with Galois group over  $k$  isomorphic to  $G$ . For  $n \leq 15$ , the data base `galpols` of MAGMA contains such a polynomial.

Let  $\alpha$  be a root of  $f$ . We know that among the splitting factors of  $f$  there exists at least one polynomial  $h$  with Galois group over  $K = k(\alpha)$  isomorphic to  $H$ .

*Remark 4.12.* If in the sequence  $S(G)$  there exists at least one subgroup of  $S_r$  different from  $H$ , then the problem is to determine which splitting factor of  $f$  admits  $H$  as Galois group. In this case, the most reliable method for determining the Galois group is that of the algebraic calculation of resolvents (see for instance [6], [9], [11], [19] or [3]). Obviously it is preferable to choose, if that is possible, a polynomial  $f$  so as to avoid this situation.

*Example 4.13.* A polynomial with Galois group  $10T_{39}$  over a monogenic extension of  $k$  can be obtained from a polynomial with Galois group  $12T_{293}$ . In one of its root fields  $K$ , a polynomial with Galois group  $12T_{293}$  factors into two linear factors and a factor of degree 10 with Galois group  $10T_{39}$  over  $K$ .

The following polynomial is the one with Galois group  $12T_{293}$  over  $\mathbb{Q}$  which is found in the data base `GALPOLS` of MAGMA:

$$f(X) = X^{12} - 13X^{10} + 65X^8 - 156X^6 + 181X^4 - 86X^2 + 7.$$

The factorization of  $f$  over  $K = \mathbb{Q}(\alpha)$  returns two linear factors and a splitting factor of degree 10:

$$\begin{aligned} h(X) = & X^{10} + X^8\alpha^2 - 13X^8 + \alpha^4X^6 - 13\alpha^2X^6 + 65X^6 + \alpha^6X^4 - 13\alpha^4X^4 \\ & + 65\alpha^2X^4 - 156X^4 + \alpha^8X^2 - 13\alpha^6X^2 + 65\alpha^4X^2 - 156\alpha^2X^2 \\ & + 181X^2 + \alpha^{10} - 13\alpha^8 + 65\alpha^6 - 156X^4 + 181\alpha^2 - 86. \end{aligned}$$

According to the splitting table of degree 16, the Galois group of  $h$  over  $\mathbb{Q}(\alpha)$  is  $10T_{39}$ .

## 5. CONCLUSION

In this paper we present many applications of *the splitting tables*. We show how they can be used for the determination of the Galois group and the splitting field of a polynomial and also for the computation of polynomials with given Galois group and coefficients in a number field. These tables can be viewed as an enlightenment for computer algebra concerning factorization of polynomials over algebraic extensions.

## REFERENCES

- [1] I. Abdeljaouad-Tej, S. Orange, G. Renault, and A. Valibouze. Computation of the decomposition group of a triangular ideal. *AAECC*, 15(3-4):279–294, 2004.
- [2] H. Anai, M. Noro, and K. Yokoyama. Computation of the splitting fields and the Galois groups of polynomials. In *Algorithms in algebraic geometry and applications (Santander, 1994)*, volume 143 of *Progr. Math.*, pages 29–50. Birkhäuser, 1996.
- [3] J.-M. Arnaudès and A. Valibouze. Lagrange resolvents. *J. Pure Appl. Algebra*, 117/118:23–40, 1997. Algorithms for algebra (Eindhoven, 1996).
- [4] Ph. Aubry and A. Valibouze. Using Galois ideals for computing relative resolvents. *J. Symbolic Comput.*, 30(6):635–651, 2000. Algorithmic methods in Galois theory.
- [5] K. Belabas. A relative van Hoeij algorithm over number fields. *J. Symbolic Comput.*, 37(5), 2004.
- [6] W.E.H. Berwick. On soluble sextic equations. *Proc. L.M.S.*, 29:1–28, 1929.
- [7] W. Bosma, J. Cannon, and C. Playoust. The Magma algebra system. I. The user language. *J. Symbolic Comput.*, 24(3-4):235–265, 1997. Computational algebra and number theory (London, 1993).
- [8] G. Butler and J. McKay. The transitive groups of degree up to eleven. *Comm. Algebra*, 11(8):863–911, 1983.
- [9] H.O. Foulkes. The resolvents of an equation of seventh degree. *Quart. J. Math. Oxford Ser.*, 2:9–19, 1931.
- [10] The GAP Group. *GAP – Groups, Algorithms, and Programming, Version 4.4*, 2005. (<http://www.gap-system.org>).
- [11] K. Girstmair. On the computation of resolvents and Galois groups. *Manuscripta Math.*, 43(2-3):289–307, 1983.
- [12] A. Hulpke. *Konstruktion transitiver Permutationsgruppen*. PhD thesis, RWTH Aachen, 1996.
- [13] F. Lehouey. *Calcul et factorisation interactive de résolvantes de Lagrange en théorie de Galois effective*. PhD thesis, Université de Rennes 1, 1999.
- [14] J. McKay. Some remarks on computing Galois groups. *SIAM J. Comput.*, 8(3):344–347, 1979.
- [15] J. McKay and R. Stauduhar. Finding relations among the roots of an irreducible polynomial. In *Proceedings of the 1997 International Symposium on Symbolic and Algebraic Computation*, pages 75–77 (electronic), New York, 1997. ACM.
- [16] M. Noro and K. Yokoyama. Factoring polynomials over algebraic extension fields. *Josai Information Science Researches*, 9:11–33, 1997.
- [17] S. Orange, G. Renault, and A. Valibouze. Calcul efficace d’un corps de décomposition. LIP6 Research Report 005, LIP6, Laboratoire d’Informatique de Paris 6, 2003. <http://www.lip6.fr/reports/lip6.2003.005.html>.
- [18] N. Rennert and A. Valibouze. Calcul de résolvantes avec les modules de Cauchy. *Experiment. Math.*, 8(4):351–366, 1999.
- [19] L. Soicher and J. McKay. Computing Galois groups over the rationals. *J. Number Theory*, 20(3):273–281, 1985.
- [20] N. Tchebotarev. *Gründzüge des Galois’schen Theorie*. P. Noordhoff, 1950.
- [21] B. Trager. Algebraic factoring and rational function integration. In *Proceedings of SYMSAC’76*, pages 219–226, 1976.
- [22] A. Valibouze. Étude des relations algébriques entre les racines d’un polynôme d’une variable. *Bull. Belg. Math. Soc. Simon Stevin*, 6(4):507–535, 1999.

## 6. SPLITTING TABLES FOR THE DEGREES FROM 3D TO 21TH

## Splitting table of degree 3

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^3]$	$(1T_1)^3$	$3T_1^{+*}$	$3!/2$	$[3, 1^2]$
$[2, 1]$	$1T_1, 2T_1$	$3T_2^*$	$3!$	$[3, 2, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 4

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^4]$	$(1T_1)^4$	$4T_1^*$	4	$[4, 1^3]$
$[1^4]$	$(1T_1)^4$	$4T_2^{+*}$	4	$[4, 1^3]$
$[2, 1^2]$	$(1T_1)^2, 2T_1$	$4T_3^*$	8	$[4, 2, 1^2]$
$[3, 1]$	$1T_1, 3T_1^{+*}$	$4T_4^{+*}$	$4!/2$	$[4, 3, 1^2]$
$[3, 1]$	$1T_1, 3T_2^*$	$4T_5^*$	$4!$	$[4, 3, 2, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 5

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^5]$	$(1T_1)^5$	$5T_1^{+*}$	5	$[5, 1^4]$
$[2^2, 1]$	$1T_1, (2T_1)^2$	$5T_2^{+*}$	10	$[5, 2, 1^3]$
$[4, 1]$	$1T_1, 4T_1^*$	$5T_3^*$	20	$[5, 4, 1^3]$
$[4, 1]$	$1T_1, 4T_4^{+*}$	$5T_4^+$	$5!/2$	$[5, \dots, 3, 1^2]$
$[4, 1]$	$1T_1, 4T_5^*$	$5T_5^*$	$5!$	$[5, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 6

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^6]$	$(1T_1)^6$	$6T_1^*$	6	$[6, 1^5]$
$[1^6]$	$(1T_1)^6$	$6T_2^*$	6	$[6, 1^5]$
$[3, 1^3]$	$(1T_1)^3, 3T_1^{+*}$	$6T_5^*$	18	$[6, 3, 1^4]$
$[2^2, 1^2]$	$(1T_1)^2, (2T_1)^2$	$6T_3^*$	12	$[6, 2, 1^4]$
$[2^2, 1^2]$	$(1T_1)^2, (2T_1)^2$	$6T_4^{+*}$	12	$[6, 2, 1^4]$
$[2^2, 1^2]$	$(1T_1)^2, (2T_1)^2$	$6T_6^*$	24	$[6, 2^2, 1^3]$
$[4, 1^2]$	$(1T_1)^2, 4T_1^*$	$6T_8^*$	24	$[6, 4, 1^4]$
$[4, 1^2]$	$(1T_1)^2, 4T_2^{+*}$	$6T_7^{+*}$	24	$[6, 4, 1^4]$
$[4, 1^2]$	$(1T_1)^2, 4T_3^*$	$6T_{11}^*$	48	$[6, 4, 2, 1^3]$
$[3, 2, 1]$	$1T_1, 2T_1, 3T_2^*$	$6T_9^*$	36	$[6, 3, 2, 1^3]$
$[3, 2, 1]$	$1T_1, 2T_1, 3T_2^*$	$6T_{10}^{+*}$	36	$[6, 3, 2, 1^3]$
$[3, 2, 1]$	$1T_1, 2T_1, 3T_2^*$	$6T_{13}^*$	72	$[6, 3, 2^2, 1^2]$
$[5, 1]$	$1T_1, 5T_2^{+*}$	$6T_{12}^+$	60	$[6, 5, 2, 1^3]$
$[5, 1]$	$1T_1, 5T_3^*$	$6T_{14}$	120	$[6, 5, 4, 1^3]$
$[5, 1]$	$1T_1, 5T_4^+$	$6T_{15}^+$	$6!/2$	$[6, \dots, 3, 1^2]$
$[5, 1]$	$1T_1, 5T_5$	$6T_{16}$	$6!$	$[6, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 7

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^7]$	$(1T_1)^7$	$7T_1^{+*}$	7	$[7, 1^6]$
$[2^3, 1]$	$1T_1, (2T_1)^3$	$7T_2^*$	14	$[7, 2, 1^5]$
$[3^2, 1]$	$1T_1, (3T_1^{+*})^2$	$7T_3^{+*}$	21	$[7, 3, 1^5]$
$[6, 1]$	$1T_1, 6T_1^*$	$7T_4^*$	42	$[7, 6, 1^5]$
$[6, 1]$	$1T_1, 6T_7^{+*}$	$7T_5^+$	168	$[7, 6, 4, 1^4]$
$[6, 1]$	$1T_1, 6T_{15}^+$	$7T_6^+$	$7!/2$	$[7, \dots, 3, 1^2]$
$[6, 1]$	$1T_1, 6T_{16}$	$7T_7$	$7!$	$[7, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 8

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^8]$	$(1T_1)^8$	$8T_1^*$	8	$[8, 1^7]$
$[1^8]$	$(1T_1)^8$	$8T_2^{+*}$	8	$[8, 1^7]$
$[1^8]$	$(1T_1)^8$	$8T_3^{+*}$	8	$[8, 1^7]$
$[1^8]$	$(1T_1)^8$	$8T_4^{+*}$	8	$[8, 1^7]$
$[1^8]$	$(1T_1)^8$	$8T_5^{+*}$	8	$[8, 1^7]$
$[2^2, 1^4]$	$(1T_1)^4, (2T_1)^2$	$8T_7^*$	16	$[8, 2, 1^6]$
$[2^2, 1^4]$	$(1T_1)^4, (2T_1)^2$	$8T_9^{+*}$	16	$[8, 2, 1^6]$
$[2^2, 1^4]$	$(1T_1)^4, (2T_1)^2$	$8T_{10}^{+*}$	16	$[8, 2, 1^6]$
$[2^2, 1^4]$	$(1T_1)^4, (2T_1)^2$	$8T_{11}^{+*}$	16	$[8, 2, 1^6]$
$[4, 1^4]$	$(1T_1)^4, 4T_1^*$	$8T_{17}^*$	32	$[8, 4, 1^6]$
$[4, 1^4]$	$(1T_1)^4, 4T_2^{+*}$	$8T_{18}^{+*}$	32	$[8, 4, 1^6]$
$[2^3, 1^2]$	$(1T_1)^2, (2T_1)^3$	$8T_6^*$	16	$[8, 2, 1^6]$
$[2^3, 1^2]$	$(1T_1)^2, (2T_1)^3$	$8T_8^*$	16	$[8, 2, 1^6]$
$[2^3, 1^2]$	$(1T_1)^2, (2T_1)^3$	$8T_{16}^*$	32	$[8, 2^2, 1^5]$
$[2^3, 1^2]$	$(1T_1)^2, (2T_1)^3$	$8T_{20}^{+*}$	32	$[8, 2^2, 1^5]$
$[2^3, 1^2]$	$(1T_1)^2, (2T_1)^3$	$8T_{21}^*$	32	$[8, 2^2, 1^5]$
$[2^3, 1^2]$	$(1T_1)^2, (2T_1)^3$	$8T_{22}^{+*}$	32	$[8, 2^2, 1^5]$
$[2^3, 1^2]$	$(1T_1)^2, (2T_1)^3$	$8T_{27}^*$	64	$[8, 2^3, 1^4]$
$[2^3, 1^2]$	$(1T_1)^2, (2T_1)^3$	$8T_{31}^*$	64	$[8, 2^3, 1^4]$
$[4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*$	$8T_{19}^{+*}$	32	$[8, 2^2, 1^5]$
$[4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}$	$8T_{15}^*$	32	$[8, 4, 1^6]$
$[4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*$	$8T_{26}^*$	64	$[8, 4, 2, 1^5]$
$[4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*$	$8T_{28}^*$	64	$[8, 4, 2, 1^5]$
$[4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*$	$8T_{29}^{+*}$	64	$[8, 4, 2, 1^5]$
$[4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*$	$8T_{30}^*$	64	$[8, 4, 2, 1^5]$
$[4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*$	$8T_{35}^*$	128	$[8, 4, 2^2, 1^4]$
$[3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2$	$8T_{12}^{+*}$	24	$[8, 3, 1^6]$
$[3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2$	$8T_{13}^{+*}$	24	$[8, 3, 1^6]$
$[3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2$	$8T_{14}^{+*}$	24	$[8, 3, 1^6]$
$[3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2$	$8T_{24}^{+*}$	48	$[8, 3, 2, 1^5]$
$[6, 1^2]$	$(1T_1)^2, 6T_2^*$	$8T_{23}^*$	48	$[8, 6, 1^6]$
$[6, 1^2]$	$(1T_1)^2, 6T_4^{+*}$	$8T_{32}^{+*}$	96	$[8, 6, 2, 1^5]$
$[6, 1^2]$	$(1T_1)^2, 6T_6^*$	$8T_{38}^*$	192	$[8, 6, 2^2, 1^4]$
$[6, 1^2]$	$(1T_1)^2, 6T_7^{+*}$	$8T_{39}^{+*}$	192	$[8, 6, 4, 1^5]$
$[6, 1^2]$	$(1T_1)^2, 6T_8^*$	$8T_{40}^*$	192	$[8, 6, 4, 1^5]$
$[6, 1^2]$	$(1T_1)^2, 6T_{11}^*$	$8T_{44}^*$	384	$[8, 6, 4, 2, 1^4]$
$[4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}$	$8T_{33}^{+*}$	96	$[8, 4, 3, 1^5]$
$[4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}$	$8T_{34}^{+*}$	96	$[8, 4, 3, 1^5]$
$[4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}$	$8T_{42}^{+*}$	288	$[8, 4, 3^2, 1^4]$
$[4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*$	$8T_{41}^{+*}$	192	$[8, 4, 3, 2, 1^4]$
$[4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*$	$8T_{45}^{+*}$	576	$[8, 4, 3^2, 2, 1^3]$
$[4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*$	$8T_{46}^*$	576	$[8, 4, 3^2, 2, 1^3]$
$[4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*$	$8T_{47}^*$	1152	$[8, 4, 3^2, 2^2, 1^2]$
$[7, 1]$	$1T_1, 7T_1^{+*}$	$8T_{25}^{+*}$	56	$[8, 7, 1^6]$
$[7, 1]$	$1T_1, 7T_3^{+*}$	$8T_{36}^{+*}$	168	$[8, 7, 3, 1^5]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 8

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[7, 1]	$1T_1, 7T_3^{+*}$	$8T_{37}^+$	168	[8, 7, 3, 1 <sup>5</sup> ]
[7, 1]	$1T_1, 7T_4^{+*}$	$8T_{43}^+$	336	[8, 7, 6, 1 <sup>5</sup> ]
[7, 1]	$1T_1, 7T_5^+$	$8T_{48}^+$	1344	[8, 7, 6, 4, 1 <sup>4</sup> ]
[7, 1]	$1T_1, 7T_6^+$	$8T_{49}^+$	$8! / 2$	[8, ..., 3, 1 <sup>2</sup> ]
[7, 1]	$1T_1, 7T_7$	$8T_{50}$	$8!$	[8, ..., 1]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 9

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^9]$	$(1T_1)^9$	$9T_1^{+*}$	9	$[9, 1^8]$
$[1^9]$	$(1T_1)^9$	$9T_2^{+*}$	9	$[9, 1^8]$
$[2^3, 1^3]$	$(1T_1)^3, (2T_1)^3$	$9T_4^*$	18	$[9, 2, 1^7]$
$[3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2$	$9T_6^{+*}$	27	$[9, 3, 1^7]$
$[3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2$	$9T_7^{+*}$	27	$[9, 3, 1^7]$
$[3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2$	$9T_{17}^{+*}$	81	$[9, 3^2, 1^6]$
$[6, 1^3]$	$(1T_1)^3, 6T_2^*$	$9T_{12}^*$	54	$[9, 6, 1^7]$
$[6, 1^3]$	$(1T_1)^3, 6T_5^*$	$9T_{20}^*$	162	$[9, 6, 3, 1^6]$
$[2^4, 1]$	$1T_1, (2T_1)^4$	$9T_3^{+*}$	18	$[9, 2, 1^7]$
$[2^4, 1]$	$1T_1, (2T_1)^4$	$9T_5^{+*}$	18	$[9, 2, 1^7]$
$[4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}$	$9T_8^*$	36	$[9, 2^2, 1^6]$
$[3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2$	$9T_{13}^*$	54	$[9, 3, 2, 1^6]$
$[3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2$	$9T_{22}^*$	162	$[9, 3^2, 2, 1^5]$
$[3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2$	$9T_{25}^{+*}$	324	$[9, 3^2, 2^2, 1^4]$
$[3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2$	$9T_{28}^*$	648	$[9, 3^2, 2^3, 1^3]$
$[6, 2, 1]$	$1T_1, 2T_1, 6T_1^*$	$9T_{10}^{+*}$	54	$[9, 6, 1^7]$
$[6, 2, 1]$	$1T_1, 2T_1, 6T_1^*$	$9T_{11}^{+*}$	54	$[9, 3, 2, 1^6]$
$[6, 2, 1]$	$1T_1, 2T_1, 6T_3^*$	$9T_{18}^*$	108	$[9, 6, 2, 1^6]$
$[6, 2, 1]$	$1T_1, 2T_1, 6T_5^*$	$9T_{21}^{+*}$	162	$[9, 3^2, 2, 1^5]$
$[6, 2, 1]$	$1T_1, 2T_1, 6T_9^*$	$9T_{24}^*$	324	$[9, 6, 3, 2, 1^5]$
$[6, 2, 1]$	$1T_1, 2T_1, 6T_{13}^*$	$9T_{29}^*$	648	$[9, 6, 3, 2^2, 1^4]$
$[6, 2, 1]$	$1T_1, 2T_1, 6T_{13}^*$	$9T_{30}^{+*}$	648	$[9, 6, 3, 2^2, 1^4]$
$[6, 2, 1]$	$1T_1, 2T_1, 6T_{13}^*$	$9T_{31}^*$	1296	$[9, 6, 3, 2^3, 1^3]$
$[4^2, 1]$	$1T_1, (4T_1^*)^2$	$9T_9^{+*}$	36	$[9, 4, 1^7]$
$[4^2, 1]$	$1T_1, (4T_3^*)^2$	$9T_{16}^*$	72	$[9, 4, 2, 1^6]$
$[8, 1]$	$1T_1, 8T_1^*$	$9T_{15}^*$	72	$[9, 8, 1^7]$
$[8, 1]$	$1T_1, 8T_5^{+*}$	$9T_{14}^{+*}$	72	$[9, 8, 1^7]$
$[8, 1]$	$1T_1, 8T_8^*$	$9T_{19}^*$	144	$[9, 8, 2, 1^6]$
$[8, 1]$	$1T_1, 8T_{12}^{+*}$	$9T_{23}^{+*}$	216	$[9, 8, 3, 1^6]$
$[8, 1]$	$1T_1, 8T_{23}^*$	$9T_{26}^*$	432	$[9, 8, 6, 1^6]$
$[8, 1]$	$1T_1, 8T_{25}^{+*}$	$9T_{27}^+$	504	$[9, 8, 7, 1^6]$
$[8, 1]$	$1T_1, 8T_{36}^{+*}$	$9T_{32}^+$	1512	$[9, 8, 7, 3, 1^5]$
$[8, 1]$	$1T_1, 8T_{49}^+$	$9T_{33}^+$	$9!/2$	$[9, \dots, 3, 1^2]$
$[8, 1]$	$1T_1, 8T_{50}$	$9T_{34}$	$9!$	$[9, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees



## Splitting table of degree 10

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{10}]$	$(1T_1)^{10}$	$10T_1^*$	10	$[10, 1^9]$
$[1^{10}]$	$(1T_1)^{10}$	$10T_2^*$	10	$[10, 1^9]$
$[5, 1^5]$	$(1T_1)^5, 5T_1^{+*}$	$10T_6^*$	50	$[10, 5, 1^8]$
$[2^4, 1^2]$	$(1T_1)^2, (2T_1)^4$	$10T_3^*$	20	$[10, 2, 1^8]$
$[2^4, 1^2]$	$(1T_1)^2, (2T_1)^4$	$10T_4^*$	20	$[10, 2, 1^8]$
$[2^4, 1^2]$	$(1T_1)^2, (2T_1)^4$	$10T_8^{+*}$	80	$[10, 2^3, 1^6]$
$[2^4, 1^2]$	$(1T_1)^2, (2T_1)^4$	$10T_{14}^*$	160	$[10, 2^4, 1^5]$
$[4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2$	$10T_5^*$	40	$[10, 4, 1^8]$
$[4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2$	$10T_{15}^{+*}$	160	$[10, 4, 2^2, 1^6]$
$[4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2$	$10T_{16}^*$	160	$[10, 4, 2^2, 1^6]$
$[4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2$	$10T_{23}^*$	320	$[10, 4, 2^3, 1^5]$
$[4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2$	$10T_{11}$	120	$[10, 4, 3, 1^7]$
$[4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2$	$10T_{12}$	120	$[10, 4, 3, 1^7]$
$[4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2$	$10T_{22}$	240	$[10, 4, 3, 2, 1^6]$
$[8, 1^2]$	$(1T_1)^2, 8T_{16}^*$	$10T_{25}^*$	320	$[10, 8, 2^2, 1^6]$
$[8, 1^2]$	$(1T_1)^2, 8T_{20}^{+*}$	$10T_{24}^{+*}$	320	$[10, 8, 2^2, 1^6]$
$[8, 1^2]$	$(1T_1)^2, 8T_{27}^*$	$10T_{29}$	640	$[10, 8, 2^3, 1^5]$
$[8, 1^2]$	$(1T_1)^2, 8T_{32}^{+*}$	$10T_{34}^+$	960	$[10, 8, 6, 2, 1^6]$
$[8, 1^2]$	$(1T_1)^2, 8T_{38}^*$	$10T_{36}$	1920	$[10, 8, 6, 2^2, 1^5]$
$[8, 1^2]$	$(1T_1)^2, 8T_{39}^{+*}$	$10T_{37}^+$	1920	$[10, 8, 6, 4, 1^6]$
$[8, 1^2]$	$(1T_1)^2, 8T_{40}^*$	$10T_{38}$	1920	$[10, 8, 6, 4, 1^6]$
$[8, 1^2]$	$(1T_1)^2, 8T_{44}^*$	$10T_{39}$	3840	$[10, 8, 6, 4, 2, 1^5]$
$[5, 2^2, 1]$	$1T_1, (2T_1)^2, 5T_2^{+*}$	$10T_9^*$	100	$[10, 5, 2, 1^7]$
$[5, 2^2, 1]$	$1T_1, (2T_1)^2, 5T_2^{+*}$	$10T_{10}^*$	100	$[10, 5, 2, 1^7]$
$[5, 2^2, 1]$	$1T_1, (2T_1)^2, 5T_2^{+*}$	$10T_{21}^*$	200	$[10, 5, 2^2, 1^6]$
$[6, 3, 1]$	$1T_1, 3T_2^*, 6T_2^*$	$10T_7^+$	60	$[10, 6, 1^8]$
$[6, 3, 1]$	$1T_1, 3T_2^*, 6T_3^*$	$10T_{13}$	120	$[10, 6, 2, 1^7]$
$[5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*$	$10T_{17}^*$	200	$[10, 5, 4, 1^7]$
$[5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*$	$10T_{18}^{+*}$	200	$[10, 5, 4, 1^7]$
$[5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*$	$10T_{19}^*$	200	$[10, 5, 4, 1^7]$
$[5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*$	$10T_{20}^*$	200	$[10, 5, 4, 1^7]$
$[5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*$	$10T_{27}^*$	400	$[10, 5, 4, 2, 1^6]$
$[5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*$	$10T_{28}^{+*}$	400	$[10, 5, 4, 2, 1^6]$
$[5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*$	$10T_{33}^*$	800	$[10, 5, 4^2, 1^6]$
$[5, 4, 1]$	$1T_1, 4T_4^{+*}, 5T_4^+$	$10T_{40}$	7200	$[10, 5, 4^2, 3^2, 1^4]$
$[5, 4, 1]$	$1T_1, 4T_5^*, 5T_5^*$	$10T_{41}$	14400	$[10, 5, 4^2, 3^2, 2, 1^3]$
$[5, 4, 1]$	$1T_1, 4T_5^*, 5T_5^*$	$10T_{42}^+$	14400	$[10, 5, 4^2, 3^2, 2, 1^3]$
$[5, 4, 1]$	$1T_1, 4T_5^*, 5T_5^*$	$10T_{43}$	28800	$[10, 5, 4^2, 3^2, 2^2, 1^2]$
$[9, 1]$	$1T_1, 9T_9^{+*}$	$10T_{26}^+$	360	$[10, 9, 4, 1^7]$
$[9, 1]$	$1T_1, 9T_{14}^{+*}$	$10T_{31}^+$	720	$[10, 9, 8, 1^7]$
$[9, 1]$	$1T_1, 9T_{15}^*$	$10T_{30}$	720	$[10, 9, 8, 1^7]$
$[9, 1]$	$1T_1, 9T_{16}^*$	$10T_{32}$	720	$[10, 9, 4, 2, 1^6]$
$[9, 1]$	$1T_1, 9T_{19}^*$	$10T_{35}$	1440	$[10, 9, 8, 2, 1^6]$
$[9, 1]$	$1T_1, 9T_{33}^+$	$10T_{44}^+$	$10! / 2$	$[10, \dots, 3, 1^2]$
$[9, 1]$	$1T_1, 9T_{34}$	$10T_{45}$	$10!$	$[10, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 11

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{11}]$	$(1T_1)^{11}$	$11T_1^{+*}$	11	$[11, 1^{10}]$
$[2^5, 1]$	$1T_1, (2T_1)^5$	$11T_2^{+*}$	22	$[11, 2, 1^9]$
$[5^2, 1]$	$1T_1, (5T_1^{+*})^2$	$11T_3^{+*}$	55	$[11, 5, 1^9]$
$[10, 1]$	$1T_1, 10T_1^*$	$11T_4^*$	110	$[11, 10, 1^9]$
$[10, 1]$	$1T_1, 10T_7^+$	$11T_5^+$	660	$[11, 10, 6, 1^8]$
$[10, 1]$	$1T_1, 10T_{31}^+$	$11T_6^+$	7920	$[11, 10, 9, 8, 1^7]$
$[10, 1]$	$1T_1, 10T_{44}^+$	$11T_7^+$	$11! / 2$	$[11, \dots, 3, 1^2]$
$[10, 1]$	$1T_1, 10T_{45}$	$11T_8$	$11!$	$[11, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 12

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{12}]$	$(1T_1)^{12}$	$12T_1^*$	12	$[12, 1^{11}]$
$[1^{12}]$	$(1T_1)^{12}$	$12T_2^{+*}$	12	$[12, 1^{11}]$
$[1^{12}]$	$(1T_1)^{12}$	$12T_3^{+*}$	12	$[12, 1^{11}]$
$[1^{12}]$	$(1T_1)^{12}$	$12T_4^{+*}$	12	$[12, 1^{11}]$
$[1^{12}]$	$(1T_1)^{12}$	$12T_5^*$	12	$[12, 1^{11}]$
$[2^3, 1^6]$	$(1T_1)^6, (2T_1)^3$	$12T_{14}^*$	24	$[12, 2, 1^{10}]$
$[2^3, 1^6]$	$(1T_1)^6, (2T_1)^3$	$12T_{15}^*$	24	$[12, 2, 1^{10}]$
$[3^2, 1^6]$	$(1T_1)^6, (3T_1^{+*})^2$	$12T_{16}^*$	36	$[12, 3, 1^{10}]$
$[3^2, 1^6]$	$(1T_1)^6, (3T_1^{+*})^2$	$12T_{17}^*$	36	$[12, 3, 1^{10}]$
$[3^2, 1^6]$	$(1T_1)^6, (3T_1^{+*})^2$	$12T_{18}^*$	36	$[12, 3, 1^{10}]$
$[3^2, 1^6]$	$(1T_1)^6, (3T_1^{+*})^2$	$12T_{19}^*$	36	$[12, 3, 1^{10}]$
$[6, 1^6]$	$(1T_1)^6, 6T_1^*$	$12T_{42}^*$	72	$[12, 6, 1^{10}]$
$[6, 1^6]$	$(1T_1)^6, 6T_2^*$	$12T_{35}^*$	72	$[12, 6, 1^{10}]$
$[2^4, 1^4]$	$(1T_1)^4, (2T_1)^4$	$12T_6^{+*}$	24	$[12, 2, 1^{10}]$
$[2^4, 1^4]$	$(1T_1)^4, (2T_1)^4$	$12T_7^{+*}$	24	$[12, 2, 1^{10}]$
$[2^4, 1^4]$	$(1T_1)^4, (2T_1)^4$	$12T_9^{+*}$	24	$[12, 2, 1^{10}]$
$[2^4, 1^4]$	$(1T_1)^4, (2T_1)^4$	$12T_{10}^{+*}$	24	$[12, 2, 1^{10}]$
$[2^4, 1^4]$	$(1T_1)^4, (2T_1)^4$	$12T_{11}^*$	24	$[12, 2, 1^{10}]$
$[2^4, 1^4]$	$(1T_1)^4, (2T_1)^4$	$12T_{21}^{+*}$	48	$[12, 2^2, 1^9]$
$[2^4, 1^4]$	$(1T_1)^4, (2T_1)^4$	$12T_{25}^{+*}$	48	$[12, 2^2, 1^9]$
$[2^4, 1^4]$	$(1T_1)^4, (2T_1)^4$	$12T_{29}^*$	48	$[12, 2^2, 1^9]$
$[2^4, 1^4]$	$(1T_1)^4, (2T_1)^4$	$12T_{30}^*$	48	$[12, 2^2, 1^9]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_1^*)^2$	$12T_{24}^{+*}$	48	$[12, 4, 1^{10}]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_1^*)^2$	$12T_{31}^{+*}$	48	$[12, 4, 1^{10}]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_1^*)^2$	$12T_{55}^{+*}$	96	$[12, 4, 2, 1^9]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_1^*)^2$	$12T_{94}^*$	192	$[12, 4^2, 1^9]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_2^{+*})^2$	$12T_{23}^{+*}$	48	$[12, 4, 1^{10}]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_2^{+*})^2$	$12T_{26}^{+*}$	48	$[12, 4, 1^{10}]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_2^{+*})^2$	$12T_{32}^{+*}$	48	$[12, 4, 1^{10}]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_2^{+*})^2$	$12T_{56}^{+*}$	96	$[12, 4, 2, 1^9]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_2^{+*})^2$	$12T_{90}^{+*}$	192	$[12, 4^2, 1^9]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_3^*)^2$	$12T_{48}^*$	96	$[12, 4, 2, 1^9]$
$[4^2, 1^4]$	$(1T_1)^4, (4T_3^*)^2$	$12T_{53}^*$	96	$[12, 4, 2, 1^9]$
$[8, 1^4]$	$(1T_1)^4, 8T_2^{+*}$	$12T_{68}^{+*}$	96	$[12, 8, 1^{10}]$
$[8, 1^4]$	$(1T_1)^4, 8T_3^{+*}$	$12T_{67}^{+*}$	96	$[12, 8, 1^{10}]$
$[8, 1^4]$	$(1T_1)^4, 8T_4^{+*}$	$12T_{62}^{+*}$	96	$[12, 8, 1^{10}]$
$[8, 1^4]$	$(1T_1)^4, 8T_5^{+*}$	$12T_{63}^{+*}$	96	$[12, 8, 1^{10}]$
$[8, 1^4]$	$(1T_1)^4, 8T_7^*$	$12T_{98}^*$	192	$[12, 8, 2, 1^9]$
$[8, 1^4]$	$(1T_1)^4, 8T_9^{+*}$	$12T_{101}^{+*}$	192	$[12, 8, 2, 1^9]$
$[8, 1^4]$	$(1T_1)^4, 8T_{10}^{+*}$	$12T_{103}^{+*}$	192	$[12, 8, 2, 1^9]$
$[8, 1^4]$	$(1T_1)^4, 8T_{11}^{+*}$	$12T_{95}^{+*}$	192	$[12, 8, 2, 1^9]$
$[8, 1^4]$	$(1T_1)^4, 8T_{17}^*$	$12T_{150}^*$	384	$[12, 8, 4, 1^9]$
$[8, 1^4]$	$(1T_1)^4, 8T_{18}^{+*}$	$12T_{139}^{+*}$	384	$[12, 8, 4, 1^9]$
$[3^3, 1^3]$	$(1T_1)^3, (3T_1^{+*})^3$	$12T_{20}^{+*}$	36	$[12, 3, 1^{10}]$
$[3^3, 1^3]$	$(1T_1)^3, (3T_1^{+*})^3$	$12T_{70}^{+*}$	108	$[12, 3^2, 1^9]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 12

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[3^3, 1^3]$	$(1T_1)^3, (3T_1^{+*})^3$	$12T_{71}^{+*}$	108	$[12, 3^2, 1^9]$
$[3^3, 1^3]$	$(1T_1)^3, (3T_1^{+*})^3$	$12T_{72}^*$	108	$[12, 3^2, 1^9]$
$[3^3, 1^3]$	$(1T_1)^3, (3T_1^{+*})^3$	$12T_{73}^*$	108	$[12, 3^2, 1^9]$
$[3^3, 1^3]$	$(1T_1)^3, (3T_1^{+*})^3$	$12T_{130}^{+*}$	324	$[12, 3^3, 1^8]$
$[3^3, 1^3]$	$(1T_1)^3, (3T_1^{+*})^3$	$12T_{131}^*$	324	$[12, 3^3, 1^8]$
$[3^3, 1^3]$	$(1T_1)^3, (3T_2^*)^3$	$12T_{45}^*$	72	$[12, 3, 2, 1^9]$
$[6, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 6T_5^*$	$12T_{116}^*$	216	$[12, 6, 3, 1^9]$
$[6, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 6T_5^*$	$12T_{121}^*$	216	$[12, 6, 3, 1^9]$
$[6, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 6T_5^*$	$12T_{167}^*$	648	$[12, 6, 3^2, 1^8]$
$[9, 1^3]$	$(1T_1)^3, 9T_6^{+*}$	$12T_{132}^{+*}$	324	$[12, 9, 3, 1^9]$
$[9, 1^3]$	$(1T_1)^3, 9T_7^{+*}$	$12T_{133}^{+*}$	324	$[12, 9, 3, 1^9]$
$[9, 1^3]$	$(1T_1)^3, 9T_{12}^*$	$12T_{175}^*$	648	$[12, 9, 6, 1^9]$
$[9, 1^3]$	$(1T_1)^3, 9T_{17}^{+*}$	$12T_{194}^{+*}$	972	$[12, 9, 3^2, 1^8]$
$[9, 1^3]$	$(1T_1)^3, 9T_{20}^*$	$12T_{231}^*$	1944	$[12, 9, 6, 3, 1^8]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_8^*$	24	$[12, 2, 1^{10}]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{12}^*$	24	$[12, 2, 1^{10}]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{13}^*$	24	$[12, 2, 1^{10}]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{50}^*$	96	$[12, 2^3, 1^8]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{51}^*$	96	$[12, 2^3, 1^8]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{58}^{+*}$	96	$[12, 2^3, 1^8]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{69}^{+*}$	96	$[12, 2^3, 1^8]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{87}^{+*}$	192	$[12, 2^4, 1^7]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{105}^*$	192	$[12, 2^4, 1^7]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{106}^{+*}$	192	$[12, 2^4, 1^7]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{107}^*$	192	$[12, 2^4, 1^7]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{134}^*$	384	$[12, 2^5, 1^6]$
$[2^5, 1^2]$	$(1T_1)^2, (2T_1)^5$	$12T_{135}^*$	384	$[12, 2^5, 1^6]$
$[4, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 4T_2^{+*}$	$12T_{28}^*$	48	$[12, 4, 1^{10}]$
$[3^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^2$	$12T_{34}^{+*}$	72	$[12, 3, 2, 1^9]$
$[3^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^2$	$12T_{37}^{+*}$	72	$[12, 3, 2, 1^9]$
$[3^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^2$	$12T_{39}^*$	72	$[12, 3, 2, 1^9]$
$[3^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^2$	$12T_{40}^{+*}$	72	$[12, 3, 2, 1^9]$
$[3^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^2$	$12T_{41}^*$	72	$[12, 3, 2, 1^9]$
$[3^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^2$	$12T_{77}^{+*}$	144	$[12, 3, 2^2, 1^8]$
$[3^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^2$	$12T_{79}^*$	144	$[12, 3, 2^2, 1^8]$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_1^*$	$12T_{36}^*$	72	$[12, 6, 1^{10}]$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_2^*$	$12T_{38}^*$	72	$[12, 6, 1^{10}]$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_3^*$	$12T_{78}^*$	144	$[12, 6, 2, 1^9]$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_3^*$	$12T_{80}^*$	144	$[12, 6, 2, 1^9]$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_3^*$	$12T_{81}^*$	144	$[12, 6, 2, 1^9]$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_3^*$	$12T_{82}^*$	144	$[12, 6, 2, 1^9]$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_3^*$	$12T_{125}^*$	288	$[12, 6, 2^2, 1^8]$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_4^{+*}$	$12T_{126}^{+*}$	288	$[12, 6, 2^2, 1^8]$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_6^*$	$12T_{158}^{+*}$	576	$[12, 6, 2^3, 1^7]$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_6^*$	$12T_{159}^*$	576	$[12, 6, 2^3, 1^7]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 12

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[6, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_6^*$	$12T_{208}^*$	1152	$[12, 6, 2^4, 1^6]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_1^*)^2$	$12T_{27}^*$	48	$[12, 4, 1^{10}]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 4T_2^{+*}$	$12T_{57}^{+*}$	96	$[12, 2^3, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 4T_3^*$	$12T_{91}^{+*}$	192	$[12, 2^4, 1^7]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 4T_3^*$	$12T_{108}^{+*}$	192	$[12, 4, 2^2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_2^{+*})^2$	$12T_{22}^*$	48	$[12, 4, 1^{10}]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, 4T_3^*$	$12T_{104}^*$	192	$[12, 2^4, 1^7]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, 4T_3^*$	$12T_{109}^{+*}$	192	$[12, 4, 2^2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{52}^*$	96	$[12, 4, 2, 1^9]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{54}^*$	96	$[12, 2^3, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{59}^*$	96	$[12, 4, 2, 1^9]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{60}^{+*}$	96	$[12, 4, 2, 1^9]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{61}^*$	96	$[12, 4, 2, 1^9]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{86}^*$	192	$[12, 4, 2^2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{88}^*$	192	$[12, 4, 2^2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{89}^{+*}$	192	$[12, 4, 2^2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{92}^*$	192	$[12, 4, 2^2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{93}^*$	192	$[12, 4, 2^2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{99}^*$	192	$[12, 4, 2^2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{136}^{+*}$	384	$[12, 4, 2^3, 1^7]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{141}^*$	384	$[12, 4^2, 2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{142}^*$	384	$[12, 4^2, 2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{143}^*$	384	$[12, 4^2, 2, 1^8]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{144}^{+*}$	384	$[12, 4, 2^3, 1^7]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{145}^*$	384	$[12, 4, 2^3, 1^7]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{154}^*$	384	$[12, 4, 2^3, 1^7]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{155}^*$	384	$[12, 4, 2^3, 1^7]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{187}^{+*}$	768	$[12, 4^2, 2^2, 1^7]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{188}^*$	768	$[12, 4, 2^4, 1^6]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{189}^*$	768	$[12, 4^2, 2^2, 1^7]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{193}^*$	768	$[12, 4, 2^4, 1^6]$
$[4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2$	$12T_{222}^*$	1536	$[12, 4^2, 2^3, 1^6]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_1^*$	$12T_{65}^{+*}$	96	$[12, 8, 1^{10}]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_2^{+*}$	$12T_{64}^*$	96	$[12, 8, 1^{10}]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_4^{+*}$	$12T_{49}^*$	96	$[12, 8, 1^{10}]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_4^{+*}$	$12T_{66}^*$	96	$[12, 8, 1^{10}]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_6^*$	$12T_{113}^{+*}$	192	$[12, 8, 2, 1^9]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_7^*$	$12T_{97}^{+*}$	192	$[12, 4, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_8^*$	$12T_{112}^{+*}$	192	$[12, 8, 2, 1^9]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_9^{+*}$	$12T_{100}^*$	192	$[12, 4, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_9^{+*}$	$12T_{110}^*$	192	$[12, 8, 2, 1^9]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_9^{+*}$	$12T_{114}^*$	192	$[12, 8, 2, 1^9]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{10}^{+*}$	$12T_{102}^*$	192	$[12, 4, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{11}^{+*}$	$12T_{96}^*$	192	$[12, 4, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{11}^{+*}$	$12T_{111}^*$	192	$[12, 8, 2, 1^9]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 12

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{11}^{+*}$	$12T_{115}^*$	192	$[12, 8, 2, 1^9]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{15}^*$	$12T_{138}^{+*}$	384	$[12, 8, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{15}^*$	$12T_{147}^*$	384	$[12, 8, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{16}^*$	$12T_{149}^*$	384	$[12, 8, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{17}^*$	$12T_{151}^*$	384	$[12, 8, 4, 1^9]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{18}^{+*}$	$12T_{148}^*$	384	$[12, 8, 4, 1^9]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{19}^{+*}$	$12T_{152}^*$	384	$[12, 8, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{19}^{+*}$	$12T_{153}^*$	384	$[12, 8, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{20}^{+*}$	$12T_{146}^*$	384	$[12, 8, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{22}^{+*}$	$12T_{137}^*$	384	$[12, 8, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{22}^{+*}$	$12T_{140}^*$	384	$[12, 8, 2^2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{26}^*$	$12T_{185}^*$	768	$[12, 8, 4, 2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{27}^*$	$12T_{191}^{+*}$	768	$[12, 8, 2^3, 1^7]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{27}^*$	$12T_{192}^*$	768	$[12, 8, 2^3, 1^7]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{27}^*$	$12T_{224}^*$	1536	$[12, 8, 2^4, 1^6]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{29}^{+*}$	$12T_{186}^*$	768	$[12, 8, 4, 2, 1^8]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{31}^*$	$12T_{184}^{+*}$	768	$[12, 8, 2^3, 1^7]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{31}^*$	$12T_{190}^*$	768	$[12, 8, 2^3, 1^7]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{31}^*$	$12T_{227}^*$	1536	$[12, 8, 2^4, 1^6]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{35}^*$	$12T_{221}^*$	1536	$[12, 8, 4, 2^2, 1^7]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{35}^*$	$12T_{223}^*$	1536	$[12, 8, 4, 2^2, 1^7]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{35}^*$	$12T_{225}^*$	1536	$[12, 8, 4, 2^2, 1^7]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{35}^*$	$12T_{226}^{+*}$	1536	$[12, 8, 4, 2^2, 1^7]$
$[8, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{35}^*$	$12T_{250}^*$	3072	$[12, 8, 4, 2^3, 1^6]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 6T_8^*$	$12T_{160}^*$	576	$[12, 6, 4, 2, 1^8]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 6T_8^*$	$12T_{161}^{+*}$	576	$[12, 6, 4, 2, 1^8]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 6T_8^*$	$12T_{200}^*$	1152	$[12, 6, 4^2, 1^8]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 6T_7^{+*}$	$12T_{162}^{+*}$	576	$[12, 6, 4, 2, 1^8]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 6T_7^{+*}$	$12T_{163}^{+*}$	576	$[12, 6, 4, 2, 1^8]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 6T_7^{+*}$	$12T_{203}^{+*}$	1152	$[12, 6, 4^2, 1^8]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{195}^{+*}$	1152	$[12, 6, 4, 2^2, 1^7]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{196}^*$	1152	$[12, 6, 4, 2^2, 1^7]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{197}^*$	1152	$[12, 6, 4, 2^2, 1^7]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{198}^*$	1152	$[12, 6, 4, 2^2, 1^7]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{199}^{+*}$	1152	$[12, 6, 4, 2^2, 1^7]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{201}^*$	1152	$[12, 6, 4^2, 1^8]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{202}^{+*}$	1152	$[12, 6, 4^2, 1^8]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{235}^*$	2304	$[12, 6, 4^2, 2, 1^7]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{236}^{+*}$	2304	$[12, 6, 4^2, 2, 1^7]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{237}^*$	2304	$[12, 6, 4^2, 2, 1^7]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{238}^*$	2304	$[12, 6, 4^2, 2, 1^7]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{240}^*$	2304	$[12, 6, 4, 2^3, 1^6]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{241}^*$	2304	$[12, 6, 4, 2^3, 1^6]$
$[6, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 6T_{11}^*$	$12T_{260}^*$	4608	$[12, 6, 4^2, 2^2, 1^6]$
$[5^2, 1^2]$	$(1T_1)^2, (5T_1^{+*})^2$	$12T_{33}^*$	60	$[12, 5, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 12

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[5^2, 1^2]$	$(1T_1)^2, (5T_2^{+*})^2$	$12T_{74}^+$	120	$[12, 5, 2, 1^9]$
$[5^2, 1^2]$	$(1T_1)^2, (5T_2^{+*})^2$	$12T_{75}^+$	120	$[12, 5, 2, 1^9]$
$[5^2, 1^2]$	$(1T_1)^2, (5T_2^{+*})^2$	$12T_{76}^+$	120	$[12, 5, 2, 1^9]$
$[5^2, 1^2]$	$(1T_1)^2, (5T_3^*)^2$	$12T_{123}^+$	240	$[12, 5, 4, 1^9]$
$[5^2, 1^2]$	$(1T_1)^2, (5T_4^+)^2$	$12T_{180}^+$	720	$[12, 5, 4, 3, 1^8]$
$[5^2, 1^2]$	$(1T_1)^2, (5T_4^+)^2$	$12T_{183}^+$	720	$[12, 5, 4, 3, 1^8]$
$[5^2, 1^2]$	$(1T_1)^2, (5T_5^2)^2$	$12T_{219}^+$	1440	$[12, 5, 4, 3, 2, 1^7]$
$[10, 1^2]$	$(1T_1)^2, 10T_4^*$	$12T_{124}$	240	$[12, 10, 2, 1^9]$
$[10, 1^2]$	$(1T_1)^2, 10T_{15}^{+*}$	$12T_{230}^+$	1920	$[12, 10, 4, 2^2, 1^7]$
$[10, 1^2]$	$(1T_1)^2, 10T_{23}^*$	$12T_{255}$	3840	$[12, 10, 4, 2^3, 1^6]$
$[10, 1^2]$	$(1T_1)^2, 10T_{24}^{+*}$	$12T_{257}^+$	3840	$[12, 10, 8, 2^2, 1^7]$
$[10, 1^2]$	$(1T_1)^2, 10T_{25}^*$	$12T_{256}$	3840	$[12, 10, 8, 2^2, 1^7]$
$[10, 1^2]$	$(1T_1)^2, 10T_{29}^*$	$12T_{270}$	7680	$[12, 10, 8, 2^3, 1^6]$
$[10, 1^2]$	$(1T_1)^2, 10T_{34}^+$	$12T_{277}^+$	11520	$[12, 10, 8, 6, 2, 1^7]$
$[10, 1^2]$	$(1T_1)^2, 10T_{36}$	$12T_{286}$	23040	$[12, 10, 8, 6, 2^2, 1^6]$
$[10, 1^2]$	$(1T_1)^2, 10T_{37}^+$	$12T_{285}^+$	23040	$[12, 10, 8, 6, 4, 1^7]$
$[10, 1^2]$	$(1T_1)^2, 10T_{38}$	$12T_{287}$	23040	$[12, 10, 8, 6, 4, 1^7]$
$[10, 1^2]$	$(1T_1)^2, 10T_{39}$	$12T_{293}$	46080	$[12, 10, 8, 6, 4, 2, 1^6]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{46}^{+*}$	72	$[12, 3, 2, 1^9]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{47}^{+*}$	72	$[12, 3, 2, 1^9]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{117}^{+*}$	216	$[12, 3^2, 2, 1^8]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{119}^*$	216	$[12, 3^2, 2, 1^8]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{168}^{+*}$	648	$[12, 3^3, 2, 1^7]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{170}^*$	648	$[12, 3^3, 2, 1^7]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{171}^{+*}$	648	$[12, 3^3, 2, 1^7]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{172}^{+*}$	648	$[12, 3^3, 2, 1^7]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{173}^{+*}$	648	$[12, 3^3, 2, 1^7]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{174}^{+*}$	648	$[12, 3^3, 2, 1^7]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{210}^{+*}$	1296	$[12, 3^3, 2^2, 1^6]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{211}^*$	1296	$[12, 3^3, 2^2, 1^6]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{214}^{+*}$	1296	$[12, 3^3, 2^2, 1^6]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{215}^{+*}$	1296	$[12, 3^3, 2^2, 1^6]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{242}^{+*}$	2592	$[12, 3^3, 2^3, 1^5]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{244}^{+*}$	2592	$[12, 3^3, 2^3, 1^5]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{245}^*$	2592	$[12, 3^3, 2^3, 1^5]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{246}^*$	2592	$[12, 3^3, 2^3, 1^5]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{261}^*$	5184	$[12, 3^3, 2^4, 1^4]$
$[3^3, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^3$	$12T_{264}^*$	5184	$[12, 3^3, 2^4, 1^4]$
$[6, 3, 2, 1]$	$1T_1, 2T_1, 3T_1^{+*}, 6T_1^*$	$12T_{43}^{+*}$	72	$[12, 6, 1^{10}]$
$[6, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_2^*$	$12T_{44}^*$	72	$[12, 6, 1^{10}]$
$[6, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_3^*$	$12T_{83}^*$	144	$[12, 6, 2, 1^9]$
$[6, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_3^*$	$12T_{84}^{+*}$	144	$[12, 4, 3, 1^9]$
$[6, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_5^*$	$12T_{118}^*$	216	$[12, 6, 3, 1^9]$
$[6, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_5^*$	$12T_{120}^*$	216	$[12, 6, 3, 1^9]$
$[6, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_5^*$	$12T_{169}^*$	648	$[12, 6, 3^2, 1^8]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 12

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_9^*$	$12T_{156}^*$	432	$[12, 6, 3, 2, 1^8]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_9^*$	$12T_{209}^*$	1296	$[12, 6, 3^2, 2, 1^7]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_9^*$	$12T_{212}^{+*}$	1296	$[12, 6, 3^2, 2, 1^7]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_9^*$	$12T_{216}^{+*}$	1296	$[12, 6, 3^2, 2, 1^7]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_9^*$	$12T_{217}^*$	1296	$[12, 6, 3^2, 2, 1^7]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_9^*$	$12T_{243}^{+*}$	2592	$[12, 6, 3^2, 2^2, 1^6]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_9^*$	$12T_{248}^*$	2592	$[12, 6, 3^2, 2^2, 1^6]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_{10}^{+*}$	$12T_{247}^*$	2592	$[12, 6, 3^2, 2^2, 1^6]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_{10}^{+*}$	$12T_{249}^{+*}$	2592	$[12, 6, 3^2, 2^2, 1^6]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_{13}^*$	$12T_{262}^*$	5184	$[12, 6, 3^2, 2^3, 1^5]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_{13}^*$	$12T_{263}^*$	5184	$[12, 6, 3^2, 2^3, 1^5]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_{13}^*$	$12T_{266}^{+*}$	5184	$[12, 6, 3^2, 2^3, 1^5]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_{13}^*$	$12T_{267}^*$	5184	$[12, 6, 3^2, 2^3, 1^5]$
[6, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 6T_{13}^*$	$12T_{274}^*$	10368	$[12, 6, 3^2, 2^4, 1^4]$
[9, 2, 1]	$1T_1, 2T_1, 9T_4^*$	$12T_{122}^{+*}$	216	$[12, 9, 2, 1^9]$
[9, 2, 1]	$1T_1, 2T_1, 9T_8^*$	$12T_{157}^{+*}$	432	$[12, 9, 4, 1^9]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{10}^{+*}$	$12T_{177}^*$	648	$[12, 9, 6, 1^9]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{11}^{+*}$	$12T_{178}^*$	648	$[12, 9, 6, 1^9]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{13}^*$	$12T_{176}^{+*}$	648	$[12, 9, 3, 2, 1^8]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{18}^*$	$12T_{213}^*$	1296	$[12, 9, 6, 2, 1^8]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{21}^{+*}$	$12T_{233}^*$	1944	$[12, 9, 6, 3, 1^8]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{22}^*$	$12T_{232}^{+*}$	1944	$[12, 9, 3^2, 2, 1^7]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{22}^*$	$12T_{234}^{+*}$	1944	$[12, 9, 3^2, 2, 1^7]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{24}^*$	$12T_{258}^*$	3888	$[12, 9, 6, 3, 2, 1^7]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{24}^*$	$12T_{259}^{+*}$	3888	$[12, 9, 6, 3, 2, 1^7]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{28}^*$	$12T_{271}^{+*}$	7776	$[12, 9, 3^2, 2^3, 1^5]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{28}^*$	$12T_{280}^*$	15552	$[12, 9, 3^2, 2^4, 1^4]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{31}^*$	$12T_{281}^{+*}$	15552	$[12, 9, 6, 3, 2^3, 1^5]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{31}^*$	$12T_{282}^{+*}$	15552	$[12, 9, 6, 3, 2^3, 1^5]$
[9, 2, 1]	$1T_1, 2T_1, 9T_{31}^*$	$12T_{289}^*$	31104	$[12, 9, 6, 3, 2^4, 1^4]$
$[4^2, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^2$	$12T_{85}^{+*}$	144	$[12, 4, 3, 1^9]$
$[4^2, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^2$	$12T_{164}^{+*}$	576	$[12, 4^2, 3, 1^8]$
$[4^2, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^2$	$12T_{166}^{+*}$	576	$[12, 4^2, 3, 1^8]$
$[4^2, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^2$	$12T_{228}^{+*}$	1728	$[12, 4^2, 3^2, 1^7]$
$[4^2, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^2$	$12T_{229}^{+*}$	1728	$[12, 4^2, 3^2, 1^7]$
$[4^2, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^2$	$12T_{265}^{+*}$	5184	$[12, 4^2, 3^3, 1^6]$
$[4^2, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^2$	$12T_{129}^*$	288	$[12, 4, 3, 2, 1^8]$
$[4^2, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^2$	$12T_{205}^*$	1152	$[12, 4^2, 3, 2, 1^7]$
$[4^2, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^2$	$12T_{253}^*$	3456	$[12, 4^2, 3^2, 2, 1^6]$
$[4^2, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^2$	$12T_{273}^*$	10368	$[12, 4^2, 3^3, 2, 1^5]$
$[4^2, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^2$	$12T_{284}^{+*}$	20736	$[12, 4^2, 3^3, 2^2, 1^4]$
$[4^2, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^2$	$12T_{292}^*$	41472	$[12, 4^2, 3^3, 2^3, 1^3]$
[8, 3, 1]	$1T_1, 3T_1^{+*}, 8T_{13}^{+*}$	$12T_{128}^{+*}$	288	$[12, 8, 3, 1^9]$
[8, 3, 1]	$1T_1, 3T_1^{+*}, 8T_{33}^{+*}$	$12T_{206}^{+*}$	1152	$[12, 8, 4, 3, 1^8]$
[8, 3, 1]	$1T_1, 3T_1^{+*}, 8T_{42}^{+*}$	$12T_{252}^{+*}$	3456	$[12, 8, 4, 3^2, 1^7]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 12

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[8, 3, 1]	$1T_1, 3T_1^{+*}, 8T_{42}^{+*}$	$12T_{275}^{+*}$	10368	$[12, 8, 4, 3^3, 1^6]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{14}^{+*}$	$12T_{127}^*$	288	$[12, 8, 3, 1^9]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{24}^{+*}$	$12T_{165}^*$	576	$[12, 8, 3, 2, 1^8]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{34}^{+*}$	$12T_{204}^*$	1152	$[12, 8, 4, 3, 1^8]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{34}^{+*}$	$12T_{207}^*$	1152	$[12, 8, 4, 3, 1^8]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{41}^{+*}$	$12T_{239}^*$	2304	$[12, 8, 4, 3, 2, 1^7]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{42}^{+*}$	$12T_{251}^*$	3456	$[12, 8, 4, 3^2, 1^7]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{42}^{+*}$	$12T_{254}^*$	3456	$[12, 8, 4, 3^2, 1^7]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{42}^{+*}$	$12T_{276}^*$	10368	$[12, 8, 4, 3^3, 1^6]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{45}^{+*}$	$12T_{268}^*$	6912	$[12, 8, 4, 3^2, 2, 1^6]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{45}^{+*}$	$12T_{283}^*$	20736	$[12, 8, 4, 3^3, 2, 1^5]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{47}^*$	$12T_{290}^{+*}$	41472	$[12, 8, 4, 3^3, 2^2, 1^4]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{47}^*$	$12T_{291}^*$	41472	$[12, 8, 4, 3^3, 2^2, 1^4]$
[8, 3, 1]	$1T_1, 3T_2^*, 8T_{47}^*$	$12T_{294}^*$	82944	$[12, 8, 4, 3^3, 2^3, 1^3]$
[6, 5, 1]	$1T_1, 5T_2^{+*}, 6T_{12}^+$	$12T_{269}^+$	7200	$[12, 6, 5^2, 2^2, 1^6]$
[6, 5, 1]	$1T_1, 5T_3^*, 6T_{14}^+$	$12T_{278}^+$	14400	$[12, 6, 5^2, 4, 2, 1^6]$
[6, 5, 1]	$1T_1, 5T_3^*, 6T_{14}^+$	$12T_{279}^+$	14400	$[12, 6, 5^2, 4, 2, 1^6]$
[6, 5, 1]	$1T_1, 5T_3^*, 6T_{14}^+$	$12T_{288}^+$	28800	$[12, 6, 5^2, 4^2, 1^6]$
[6, 5, 1]	$1T_1, 5T_4^+, 6T_{12}^+$	$12T_{181}^+$	720	$[12, 6, 5, 2, 1^8]$
[6, 5, 1]	$1T_1, 5T_4^+, 6T_{12}^+$	$12T_{182}^+$	720	$[12, 6, 5, 2, 1^8]$
[6, 5, 1]	$1T_1, 5T_4^+, 6T_{15}^+$	$12T_{296}^+$	259200	$[12, 6, 5^2, 4^2, 3^2, 1^4]$
[6, 5, 1]	$1T_1, 5T_5, 6T_{14}^+$	$12T_{220}^+$	1440	$[12, 6, 5, 4, 1^8]$
[6, 5, 1]	$1T_1, 5T_5, 6T_{16}^+$	$12T_{297}^+$	518400	$[12, 6, 5^2, 4^2, 3^2, 2, 1^3]$
[6, 5, 1]	$1T_1, 5T_5, 6T_{16}^+$	$12T_{298}^+$	518400	$[12, 6, 5^2, 4^2, 3^2, 2, 1^3]$
[6, 5, 1]	$1T_1, 5T_5, 6T_{16}^+$	$12T_{299}^+$	1036800	$[12, 6, 5^2, 4^2, 3^2, 2^2, 1^2]$
[11, 1]	$1T_1, 11T_3^{+*}$	$12T_{179}^+$	660	$[12, 11, 5, 1^9]$
[11, 1]	$1T_1, 11T_4^*$	$12T_{218}^+$	1320	$[12, 11, 10, 1^9]$
[11, 1]	$1T_1, 11T_5^+$	$12T_{272}^+$	7920	$[12, 11, 10, 6, 1^8]$
[11, 1]	$1T_1, 11T_6^+$	$12T_{295}^+$	95040	$[12, 11, 10, 9, 8, 1^7]$
[11, 1]	$1T_1, 11T_7^+$	$12T_{300}^+$	$12! / 2$	$[12, \dots, 3, 1^2]$
[11, 1]	$1T_1, 11T_8^+$	$12T_{301}^+$	$12!$	$[12, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 13

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{13}]$	$(1T_1)^{13}$	$13T_1^{+*}$	13	$[13, 1^{12}]$
$[2^6, 1]$	$1T_1, (2T_1)^6$	$13T_2^{+*}$	26	$[13, 2, 1^{11}]$
$[3^4, 1]$	$1T_1, (3T_1^{+*})^4$	$13T_3^{+*}$	39	$[13, 3, 1^{11}]$
$[4^3, 1]$	$1T_1, (4T_1^*)^3$	$13T_4^*$	52	$[13, 4, 1^{11}]$
$[6^2, 1]$	$1T_1, (6T_1^*)^2$	$13T_5^{+*}$	78	$[13, 6, 1^{11}]$
$[12, 1]$	$1T_1, 12T_1^*$	$13T_6^*$	156	$[13, 12, 1^{11}]$
$[12, 1]$	$1T_1, 12T_{157}^{+*}$	$13T_7^+$	5616	$[13, 12, 9, 2^2, 1^8]$
$[12, 1]$	$1T_1, 12T_{300}^+$	$13T_8^+$	$13!/2$	$[13, \dots, 3, 1^2]$
$[12, 1]$	$1T_1, 12T_{301}$	$13T_9$	$13!$	$[13, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 14

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{14}]$	$(1T_1)^{14}$	$14T_1^*$	14	$[14, 1^{13}]$
$[1^{14}]$	$(1T_1)^{14}$	$14T_2^*$	14	$[14, 1^{13}]$
$[7, 1^7]$	$(1T_1)^7, 7T_1^{+*}$	$14T_8^*$	98	$[14, 7, 1^{12}]$
$[2^6, 1^2]$	$(1T_1)^2, (2T_1)^6$	$14T_3^*$	28	$[14, 2, 1^{12}]$
$[2^6, 1^2]$	$(1T_1)^2, (2T_1)^6$	$14T_6^{+*}$	56	$[14, 2^2, 1^{11}]$
$[2^6, 1^2]$	$(1T_1)^2, (2T_1)^6$	$14T_9^*$	112	$[14, 2^3, 1^{10}]$
$[2^6, 1^2]$	$(1T_1)^2, (2T_1)^6$	$14T_{21}^{+*}$	448	$[14, 2^5, 1^8]$
$[2^6, 1^2]$	$(1T_1)^2, (2T_1)^6$	$14T_{29}^*$	896	$[14, 2^6, 1^7]$
$[3^4, 1^2]$	$(1T_1)^2, (3T_1^{+*})^4$	$14T_4^*$	42	$[14, 3, 1^{12}]$
$[3^4, 1^2]$	$(1T_1)^2, (3T_1^{+*})^4$	$14T_5^*$	42	$[14, 3, 1^{12}]$
$[4^3, 1^2]$	$(1T_1)^2, (4T_3^*)^3$	$14T_{27}^*$	896	$[14, 4, 2^4, 1^8]$
$[4^3, 1^2]$	$(1T_1)^2, (4T_3^*)^3$	$14T_{28}^{+*}$	896	$[14, 4, 2^4, 1^8]$
$[4^3, 1^2]$	$(1T_1)^2, (4T_3^*)^3$	$14T_{38}^*$	1792	$[14, 4, 2^5, 1^7]$
$[6^2, 1^2]$	$(1T_1)^2, (6T_1^*)^2$	$14T_7^*$	84	$[14, 6, 1^{12}]$
$[6^2, 1^2]$	$(1T_1)^2, (6T_4^{+*})^2$	$14T_{11}^{+*}$	168	$[14, 6, 2, 1^{11}]$
$[6^2, 1^2]$	$(1T_1)^2, 6T_4^{+*}, 6T_6^*$	$14T_{18}^*$	336	$[14, 6, 2^2, 1^{10}]$
$[6^2, 1^2]$	$(1T_1)^2, (6T_6^*)^2$	$14T_{35}^{+*}$	1344	$[14, 6, 2^4, 1^8]$
$[6^2, 1^2]$	$(1T_1)^2, (6T_6^*)^2$	$14T_{44}^*$	2688	$[14, 6, 2^5, 1^7]$
$[6^2, 1^2]$	$(1T_1)^2, (6T_7^{+*})^2$	$14T_{19}^*$	336	$[14, 6, 4, 1^{11}]$
$[6^2, 1^2]$	$(1T_1)^2, (6T_{15}^+)^2$	$14T_{46}^*$	5040	$[14, 6, 5, 4, 3, 1^9]$
$[6^2, 1^2]$	$(1T_1)^2, (6T_{15}^+)^2$	$14T_{47}^*$	5040	$[14, 6, 5, 4, 3, 1^9]$
$[6^2, 1^2]$	$(1T_1)^2, (6T_{16}^+)^2$	$14T_{49}^*$	10080	$[14, 6, 5, 4, 3, 2, 1^8]$
$[12, 1^2]$	$(1T_1)^2, 12T_4^{+*}$	$14T_{10}^+$	168	$[14, 12, 1^{12}]$
$[12, 1^2]$	$(1T_1)^2, 12T_8^*$	$14T_{17}^*$	336	$[14, 12, 2, 1^{11}]$
$[12, 1^2]$	$(1T_1)^2, 12T_{63}^{+*}$	$14T_{33}^+$	1344	$[14, 12, 8, 1^{11}]$
$[12, 1^2]$	$(1T_1)^2, 12T_{67}^{+*}$	$14T_{34}^+$	1344	$[14, 12, 8, 1^{11}]$
$[12, 1^2]$	$(1T_1)^2, 12T_{87}^{+*}$	$14T_{41}^{+*}$	2688	$[14, 12, 2^4, 1^8]$
$[12, 1^2]$	$(1T_1)^2, 12T_{105}^*$	$14T_{40}^*$	2688	$[14, 12, 2^4, 1^8]$
$[12, 1^2]$	$(1T_1)^2, 12T_{110}^*$	$14T_{43}^*$	2688	$[14, 12, 8, 2, 1^{10}]$
$[12, 1^2]$	$(1T_1)^2, 12T_{115}^*$	$14T_{42}^*$	2688	$[14, 12, 8, 2, 1^{10}]$
$[12, 1^2]$	$(1T_1)^2, 12T_{134}^*$	$14T_{48}^*$	5376	$[14, 12, 2^5, 1^7]$
$[12, 1^2]$	$(1T_1)^2, 12T_{184}^{+*}$	$14T_{50}^+$	10752	$[14, 12, 8, 2^3, 1^8]$
$[12, 1^2]$	$(1T_1)^2, 12T_{227}^*$	$14T_{51}^*$	21504	$[14, 12, 8, 2^4, 1^7]$
$[12, 1^2]$	$(1T_1)^2, 12T_{277}^+$	$14T_{53}^+$	161280	$[14, 12, 10, 8, 6, 2, 1^8]$
$[12, 1^2]$	$(1T_1)^2, 12T_{285}^+$	$14T_{55}^+$	322560	$[14, 12, 10, 8, 6, 4, 1^8]$
$[12, 1^2]$	$(1T_1)^2, 12T_{286}^*$	$14T_{56}^*$	322560	$[14, 12, 10, 8, 6, 2^2, 1^7]$
$[12, 1^2]$	$(1T_1)^2, 12T_{287}^*$	$14T_{54}^*$	322560	$[14, 12, 10, 8, 6, 4, 1^8]$
$[12, 1^2]$	$(1T_1)^2, 12T_{293}^*$	$14T_{57}^*$	645120	$[14, 12, 10, 8, 6, 4, 2, 1^7]$
$[7, 2^3, 1]$	$1T_1, (2T_1)^3, 7T_2^*$	$14T_{12}^{+*}$	196	$[14, 7, 2, 1^{11}]$
$[7, 2^3, 1]$	$1T_1, (2T_1)^3, 7T_2^*$	$14T_{13}^*$	196	$[14, 7, 2, 1^{11}]$
$[7, 2^3, 1]$	$1T_1, (2T_1)^3, 7T_2^*$	$14T_{20}^*$	392	$[14, 7, 2^2, 1^{10}]$
$[7, 3^2, 1]$	$1T_1, (3T_1^{+*})^2, 7T_3^{+*}$	$14T_{14}^*$	294	$[14, 7, 3, 1^{11}]$
$[7, 3^2, 1]$	$1T_1, (3T_1^{+*})^2, 7T_3^{+*}$	$14T_{15}^*$	294	$[14, 7, 3, 1^{11}]$
$[7, 3^2, 1]$	$1T_1, (3T_1^{+*})^2, 7T_3^{+*}$	$14T_{26}^*$	882	$[14, 7, 3^2, 1^{10}]$
$[6, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 6T_7^{+*}$	$14T_{16}^*$	336	$[14, 4, 3, 2, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 14

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[7, 6, 1]	$1T_1, 6T_1^*, 7T_4^*$	$14T_{22}^{+*}$	588	[14, 7, 6, $1^{11}$ ]
[7, 6, 1]	$1T_1, 6T_1^*, 7T_4^*$	$14T_{23}^{+*}$	588	[14, 7, 6, $1^{11}$ ]
[7, 6, 1]	$1T_1, 6T_1^*, 7T_4^*$	$14T_{24}^*$	588	[14, 7, 6, $1^{11}$ ]
[7, 6, 1]	$1T_1, 6T_1^*, 7T_4^*$	$14T_{25}^*$	588	[14, 7, 6, $1^{11}$ ]
[7, 6, 1]	$1T_1, 6T_1^*, 7T_4^*$	$14T_{31}^*$	1176	[14, 7, 6, 2, $1^{10}$ ]
[7, 6, 1]	$1T_1, 6T_1^*, 7T_4^*$	$14T_{32}^*$	1176	[14, 7, 6, 2, $1^{10}$ ]
[7, 6, 1]	$1T_1, 6T_1^*, 7T_4^*$	$14T_{36}^{+*}$	1764	[14, 7, 6, 3, $1^{10}$ ]
[7, 6, 1]	$1T_1, 6T_1^*, 7T_4^*$	$14T_{37}^*$	1764	[14, 7, 6, 3, $1^{10}$ ]
[7, 6, 1]	$1T_1, 6T_1^*, 7T_4^*$	$14T_{45}^*$	3528	[14, 7, $6^2, 1^{10}$ ]
[7, 6, 1]	$1T_1, 6T_7^{+*}, 7T_5^+$	$14T_{52}$	56448	[14, 7, $6^2, 4^2, 1^8$ ]
[7, 6, 1]	$1T_1, 6T_{15}^+, 7T_6^+$	$14T_{58}$	12700800	[14, 7, $6^2, 5^2, 4^2, 3^2, 1^4$ ]
[7, 6, 1]	$1T_1, 6T_{16}, 7T_7$	$14T_{59}^+$	25401600	[14, 7, $6^2, 5^2, 4^2, 3^2, 2, 1^3$ ]
[7, 6, 1]	$1T_1, 6T_{16}, 7T_7$	$14T_{60}$	25401600	[14, 7, $6^2, 5^2, 4^2, 3^2, 2, 1^3$ ]
[7, 6, 1]	$1T_1, 6T_{16}, 7T_7$	$14T_{61}$	50803200	[14, 7, $6^2, 5^2, 4^2, 3^2, 2^2, 1^2$ ]
[13, 1]	$1T_1, 13T_5^{+*}$	$14T_{30}^+$	1092	[14, 13, 6, $1^{11}$ ]
[13, 1]	$1T_1, 13T_6^*$	$14T_{39}$	2184	[14, 13, 12, $1^{11}$ ]
[13, 1]	$1T_1, 13T_8^+$	$14T_{62}^+$	$14! / 2$	[14, ..., 3, $1^2$ ]
[13, 1]	$1T_1, 13T_9$	$14T_{63}$	$14!$	[14, ..., 1]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 15

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{15}]$	$(1T_1)^{15}$	$15T_1^{+*}$	15	$[15, 1^{14}]$
$[2^5, 1^5]$	$(1T_1)^5, (2T_1)^5$	$15T_4^*$	30	$[15, 2, 1^{13}]$
$[5^2, 1^5]$	$(1T_1)^5, (5T_1^{+*})^2$	$15T_9^{+*}$	75	$[15, 5, 1^{13}]$
$[5^2, 1^5]$	$(1T_1)^5, (5T_1^{+*})^2$	$15T_{25}^{+*}$	375	$[15, 5^2, 1^{12}]$
$[10, 1^5]$	$(1T_1)^5, 10T_2^*$	$15T_{13}^*$	150	$[15, 10, 1^{13}]$
$[10, 1^5]$	$(1T_1)^5, 10T_6^*$	$15T_{32}^*$	750	$[15, 10, 5, 1^{12}]$
$[2^6, 1^3]$	$(1T_1)^3, (2T_1)^6$	$15T_3^{+*}$	30	$[15, 2, 1^{13}]$
$[3^4, 1^3]$	$(1T_1)^3, (3T_1^{+*})^4$	$15T_{26}^{+*}$	405	$[15, 3^3, 1^{11}]$
$[3^4, 1^3]$	$(1T_1)^3, (3T_1^{+*})^4$	$15T_{36}^{+*}$	1215	$[15, 3^4, 1^{10}]$
$[4^3, 1^3]$	$(1T_1)^3, (4T_1^*)^3$	$15T_8^*$	60	$[15, 4, 1^{13}]$
$[4^3, 1^3]$	$(1T_1)^3, (4T_2^{+*})^3$	$15T_5^+$	60	$[15, 4, 1^{13}]$
$[4^3, 1^3]$	$(1T_1)^3, (4T_4^{+*})^3$	$15T_{16}^+$	180	$[15, 4, 3, 1^{12}]$
$[4^3, 1^3]$	$(1T_1)^3, (4T_5^*)^3$	$15T_{24}^*$	360	$[15, 4, 3, 2, 1^{11}]$
$[6^2, 1^3]$	$(1T_1)^3, (6T_5^*)^2$	$15T_{34}^{+*}$	810	$[15, 6, 3^2, 1^{11}]$
$[6^2, 1^3]$	$(1T_1)^3, (6T_5^*)^2$	$15T_{46}^{+*}$	2430	$[15, 6, 3^3, 1^{10}]$
$[12, 1^3]$	$(1T_1)^3, 12T_4^{+*}$	$15T_{15}^+$	180	$[15, 12, 1^{13}]$
$[12, 1^3]$	$(1T_1)^3, 12T_{72}^*$	$15T_{41}^*$	1620	$[15, 12, 3^2, 1^{11}]$
$[12, 1^3]$	$(1T_1)^3, 12T_{131}^*$	$15T_{56}^*$	4860	$[15, 12, 3^3, 1^{10}]$
$[12, 1^3]$	$(1T_1)^3, 12T_{133}^{+*}$	$15T_{53}^+$	4860	$[15, 12, 9, 3, 1^{11}]$
$[12, 1^3]$	$(1T_1)^3, 12T_{175}^*$	$15T_{63}^*$	9720	$[15, 12, 9, 6, 1^{11}]$
$[12, 1^3]$	$(1T_1)^3, 12T_{194}^{+*}$	$15T_{69}^+$	14580	$[15, 12, 9, 3^2, 1^{10}]$
$[12, 1^3]$	$(1T_1)^3, 12T_{231}^*$	$15T_{78}^*$	29160	$[15, 12, 9, 6, 3, 1^{10}]$
$[2^7, 1]$	$1T_1, (2T_1)^7$	$15T_2^*$	30	$[15, 2, 1^{13}]$
$[4^2, 2^3, 1]$	$1T_1, (2T_1)^3, (4T_2^{+*})^2$	$15T_7^*$	60	$[15, 4, 1^{13}]$
$[5^2, 2^2, 1]$	$1T_1, (2T_1)^2, (5T_2^{+*})^2$	$15T_{12}^{+*}$	150	$[15, 5, 2, 1^{12}]$
$[5^2, 2^2, 1]$	$1T_1, (2T_1)^2, (5T_2^{+*})^2$	$15T_{30}^{+*}$	750	$[15, 5^2, 2, 1^{11}]$
$[5^2, 2^2, 1]$	$1T_1, (2T_1)^2, (5T_2^{+*})^2$	$15T_{39}^{+*}$	1500	$[15, 5^2, 2^2, 1^{10}]$
$[5^2, 2^2, 1]$	$1T_1, (2T_1)^2, (5T_2^{+*})^2$	$15T_{50}^{+*}$	3000	$[15, 5^2, 2^3, 1^9]$
$[10, 2^2, 1]$	$1T_1, (2T_1)^2, 10T_1^*$	$15T_{14}^*$	150	$[15, 10, 1^{13}]$
$[10, 2^2, 1]$	$1T_1, (2T_1)^2, 10T_3^*$	$15T_{18}^*$	300	$[15, 10, 2, 1^{12}]$
$[10, 2^2, 1]$	$1T_1, (2T_1)^2, 10T_6^*$	$15T_{31}^*$	750	$[15, 10, 5, 1^{12}]$
$[10, 2^2, 1]$	$1T_1, (2T_1)^2, 10T_9^*$	$15T_{40}^*$	1500	$[15, 10, 5, 2, 1^{11}]$
$[10, 2^2, 1]$	$1T_1, (2T_1)^2, 10T_{21}^*$	$15T_{48}^*$	3000	$[15, 10, 5, 2^2, 1^{10}]$
$[10, 2^2, 1]$	$1T_1, (2T_1)^2, 10T_{21}^*$	$15T_{51}^*$	3000	$[15, 10, 5, 2^2, 1^{10}]$
$[10, 2^2, 1]$	$1T_1, (2T_1)^2, 10T_{21}^*$	$15T_{60}^*$	6000	$[15, 10, 5, 2^3, 1^9]$
$[3^4, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^4$	$15T_{33}^*$	810	$[15, 3^3, 2, 1^{10}]$
$[3^4, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^4$	$15T_{44}^*$	2430	$[15, 3^4, 2, 1^9]$
$[3^4, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^4$	$15T_{71}^{+*}$	19440	$[15, 3^4, 2^4, 1^6]$
$[3^4, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^4$	$15T_{81}^*$	38880	$[15, 3^4, 2^5, 1^5]$
$[4^3, 2, 1]$	$1T_1, 2T_1, (4T_1^*)^3$	$15T_6^{+*}$	60	$[15, 4, 1^{13}]$
$[8, 4, 2, 1]$	$1T_1, 2T_1, 4T_1^*, 8T_2^{+*}$	$15T_{11}^*$	120	$[15, 8, 1^{13}]$
$[8, 4, 2, 1]$	$1T_1, 2T_1, 4T_3^*, 8T_4^{+*}$	$15T_{10}^+$	120	$[15, 8, 1^{13}]$
$[8, 4, 2, 1]$	$1T_1, 2T_1, 4T_4^{+*}, 8T_{13}^{+*}$	$15T_{23}^*$	360	$[15, 8, 3, 1^{12}]$
$[8, 4, 2, 1]$	$1T_1, 2T_1, 4T_5^*, 8T_{14}^{+*}$	$15T_{22}^+$	360	$[15, 8, 3, 1^{12}]$
$[8, 4, 2, 1]$	$1T_1, 2T_1, 4T_5^*, 8T_{24}^{+*}$	$15T_{29}^*$	720	$[15, 8, 3, 2, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 15

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[6^2, 2, 1]$	$1T_1, 2T_1, (6T_5^*)^2$	$15T_{35}^*$	810	$[15, 6, 3^2, 1^{11}]$
$[6^2, 2, 1]$	$1T_1, 2T_1, (6T_5^*)^2$	$15T_{45}^*$	2430	$[15, 6, 3^3, 1^{10}]$
$[6^2, 2, 1]$	$1T_1, 2T_1, (6T_9^*)^2$	$15T_{43}^*$	1620	$[15, 6, 3^2, 2, 1^{10}]$
$[6^2, 2, 1]$	$1T_1, 2T_1, (6T_9^*)^2$	$15T_{55}^*$	4860	$[15, 6, 3^3, 2, 1^9]$
$[6^2, 2, 1]$	$1T_1, 2T_1, (6T_{13}^*)^2$	$15T_{79}^*$	38880	$[15, 6, 3^3, 2^4, 1^6]$
$[6^2, 2, 1]$	$1T_1, 2T_1, (6T_{13}^*)^2$	$15T_{80}^{+*}$	38880	$[15, 6, 3^3, 2^4, 1^6]$
$[6^2, 2, 1]$	$1T_1, 2T_1, (6T_{13}^*)^2$	$15T_{86}^*$	77760	$[15, 6, 3^3, 2^5, 1^5]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_8^*$	$15T_{21}^+$	360	$[15, 12, 2, 1^{12}]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{73}^*$	$15T_{42}^{+*}$	1620	$[15, 12, 3^2, 1^{11}]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{119}^*$	$15T_{52}^*$	3240	$[15, 12, 3^2, 2, 1^{10}]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{131}^*$	$15T_{54}^{+*}$	4860	$[15, 12, 3^3, 1^{10}]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{170}^*$	$15T_{64}^*$	9720	$[15, 12, 3^3, 2, 1^9]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{176}^{+*}$	$15T_{61}$	9720	$[15, 12, 9, 3, 2, 1^{10}]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{178}^*$	$15T_{62}^+$	9720	$[15, 12, 9, 6, 1^{11}]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{213}^*$	$15T_{70}$	19440	$[15, 12, 9, 6, 2, 1^{10}]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{233}^*$	$15T_{77}^+$	29160	$[15, 12, 9, 6, 3, 1^{10}]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{234}^{+*}$	$15T_{76}$	29160	$[15, 12, 9, 3^2, 2, 1^9]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{258}^*$	$15T_{83}$	58320	$[15, 12, 9, 6, 3, 2, 1^9]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{264}^*$	$15T_{84}^{+*}$	77760	$[15, 12, 3^3, 2^4, 1^6]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{264}^*$	$15T_{85}^*$	77760	$[15, 12, 3^3, 2^4, 1^6]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{264}^*$	$15T_{87}^*$	155520	$[15, 12, 3^3, 2^5, 1^5]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{280}^*$	$15T_{88}^+$	233280	$[15, 12, 9, 3^2, 2^4, 1^6]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{280}^*$	$15T_{90}$	466560	$[15, 12, 9, 3^2, 2^5, 1^5]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{289}^*$	$15T_{89}^+$	466560	$[15, 12, 9, 6, 3, 2^4, 1^6]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{289}^*$	$15T_{91}$	466560	$[15, 12, 9, 6, 3, 2^4, 1^6]$
$[12, 2, 1]$	$1T_1, 2T_1, 12T_{289}^*$	$15T_{93}$	933120	$[15, 12, 9, 6, 3, 2^5, 1^5]$
$[5^2, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^2$	$15T_{19}^*$	300	$[15, 5, 4, 1^{12}]$
$[5^2, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^2$	$15T_{38}^*$	1500	$[15, 5^2, 4, 1^{11}]$
$[5^2, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^2$	$15T_{57}^{+*}$	6000	$[15, 5^2, 4^2, 1^{10}]$
$[5^2, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^2$	$15T_{59}^*$	6000	$[15, 5^2, 4, 2^2, 1^9]$
$[5^2, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^2$	$15T_{67}^{+*}$	12000	$[15, 5^2, 4^2, 2, 1^9]$
$[5^2, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^2$	$15T_{75}^*$	24000	$[15, 5^2, 4^3, 1^9]$
$[5^2, 4, 1]$	$1T_1, 4T_4^{+*}, (5T_4^+)^2$	$15T_{92}^+$	648000	$[15, 5^2, 4^3, 3^3, 1^6]$
$[5^2, 4, 1]$	$1T_1, 4T_5^*, (5T_5)^2$	$15T_{95}$	1296000	$[15, 5^2, 4^3, 3^3, 2, 1^5]$
$[5^2, 4, 1]$	$1T_1, 4T_5^*, (5T_5)^2$	$15T_{98}^+$	2592000	$[15, 5^2, 4^3, 3^3, 2^2, 1^4]$
$[5^2, 4, 1]$	$1T_1, 4T_5^*, (5T_5)^2$	$15T_{101}$	5184000	$[15, 5^2, 4^3, 3^3, 2^3, 1^3]$
$[10, 4, 1]$	$1T_1, 4T_1^*, 10T_4^*$	$15T_{17}^{+*}$	300	$[15, 10, 2, 1^{12}]$
$[10, 4, 1]$	$1T_1, 4T_1^*, 10T_5^*$	$15T_{27}^*$	600	$[15, 10, 4, 1^{12}]$
$[10, 4, 1]$	$1T_1, 4T_1^*, 10T_{10}^*$	$15T_{37}^{+*}$	1500	$[15, 10, 5, 2, 1^{11}]$
$[10, 4, 1]$	$1T_1, 4T_1^*, 10T_{17}^*$	$15T_{49}^*$	3000	$[15, 10, 5, 4, 1^{11}]$
$[10, 4, 1]$	$1T_1, 4T_1^*, 10T_{21}^*$	$15T_{58}^{+*}$	6000	$[15, 10, 5, 2^3, 1^9]$
$[10, 4, 1]$	$1T_1, 4T_1^*, 10T_{27}^*$	$15T_{68}^*$	12000	$[15, 10, 5, 4, 2^2, 1^9]$
$[10, 4, 1]$	$1T_1, 4T_1^*, 10T_{33}^*$	$15T_{65}^*$	12000	$[15, 10, 5, 4^2, 1^{10}]$
$[10, 4, 1]$	$1T_1, 4T_1^*, 10T_{33}^*$	$15T_{66}^*$	12000	$[15, 10, 5, 4^2, 1^{10}]$
$[10, 4, 1]$	$1T_1, 4T_1^*, 10T_{33}^*$	$15T_{73}^{+*}$	24000	$[15, 10, 5, 4^2, 2, 1^9]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 15

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[10, 4, 1]	$1T_1, 4T_1^*, 10T_{33}^*$	$15T_{74}^*$	24000	[15, 10, 5, 4 <sup>2</sup> , 2, 1 <sup>9</sup> ]
[10, 4, 1]	$1T_1, 4T_1^*, 10T_{33}^*$	$15T_{82}^*$	48000	[15, 10, 5, 4 <sup>3</sup> , 1 <sup>9</sup> ]
[10, 4, 1]	$1T_1, 4T_4^{+*}, 10T_{40}$	$15T_{96}$	1296000	[15, 10, 5, 4 <sup>3</sup> , 3 <sup>3</sup> , 1 <sup>6</sup> ]
[10, 4, 1]	$1T_1, 4T_5^*, 10T_{40}$	$15T_{94}^+$	1296000	[15, 10, 5, 4 <sup>3</sup> , 3 <sup>3</sup> , 1 <sup>6</sup> ]
[10, 4, 1]	$1T_1, 4T_5^*, 10T_{41}$	$15T_{97}$	2592000	[15, 10, 5, 4 <sup>3</sup> , 3 <sup>3</sup> , 2, 1 <sup>5</sup> ]
[10, 4, 1]	$1T_1, 4T_5^*, 10T_{43}$	$15T_{99}^+$	5184000	[15, 10, 5, 4 <sup>3</sup> , 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>4</sup> ]
[10, 4, 1]	$1T_1, 4T_5^*, 10T_{43}$	$15T_{100}$	5184000	[15, 10, 5, 4 <sup>3</sup> , 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>4</sup> ]
[10, 4, 1]	$1T_1, 4T_5^*, 10T_{43}$	$15T_{102}$	10368000	[15, 10, 5, 4 <sup>3</sup> , 3 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>3</sup> ]
[8, 6, 1]	$1T_1, 6T_7^{+*}, 8T_{14}^{+*}$	$15T_{20}^+$	360	[15, 8, 3, 1 <sup>12</sup> ]
[8, 6, 1]	$1T_1, 6T_7^{+*}, 8T_{24}^{+*}$	$15T_{28}^+$	720	[15, 8, 3, 2, 1 <sup>11</sup> ]
[14, 1]	$1T_1, 14T_{10}^+$	$15T_{47}^+$	2520	[15, 14, 12, 1 <sup>12</sup> ]
[14, 1]	$1T_1, 14T_{34}^+$	$15T_{72}^+$	20160	[15, 14, 12, 8, 1 <sup>11</sup> ]
[14, 1]	$1T_1, 14T_{62}^+$	$15T_{103}^+$	15!/2	[15, ..., 3, 1 <sup>2</sup> ]
[14, 1]	$1T_1, 14T_{63}$	$15T_{104}$	15!	[15, ..., 1]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{16}]$	$(1T_1)^{16}$	$16T_1^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_2^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_3^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_4^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_5^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_6^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_7^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_8^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_9^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_{10}^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_{11}^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_{12}^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_{13}^{+*}$	16	$[16, 1^{15}]$
$[1^{16}]$	$(1T_1)^{16}$	$16T_{14}^{+*}$	16	$[16, 1^{15}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{15}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{16}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{17}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{18}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{19}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{20}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{21}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{22}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{23}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{24}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{25}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{31}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{33}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{35}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{36}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{39}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{40}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{42}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{43}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{47}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{49}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{50}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{53}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^4, 1^8]$	$(1T_1)^8, (2T_1)^4$	$16T_{54}^{+*}$	32	$[16, 2, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_1^*)^2$	$16T_{111}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_1^*)^2$	$16T_{114}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_1^*)^2$	$16T_{121}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_1^*)^2$	$16T_{124}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_1^*)^2$	$16T_{137}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_1^*)^2$	$16T_{139}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_1^*)^2$	$16T_{141}^{+*}$	64	$[16, 4, 1^{14}]$
$G$ : Possible Galois Groups, $D(G)$ : Degrees of factors, $S(G)$ : Galois Groups of factors, $\mathcal{L}(G)$ : Initial Degrees				
$\Rightarrow$				



## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 1^8]$	$(1T_1)^8, (4T_1^*)^2$	$16T_{168}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_2^{+*})^2$	$16T_{79}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_2^{+*})^2$	$16T_{95}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_2^{+*})^2$	$16T_{105}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_2^{+*})^2$	$16T_{117}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_2^{+*})^2$	$16T_{149}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 1^8]$	$(1T_1)^8, (4T_2^{+*})^2$	$16T_{158}^{+*}$	64	$[16, 4, 1^{14}]$
$[8, 1^8]$	$(1T_1)^8, 8T_1^*$	$16T_{289}^*$	128	$[16, 8, 1^{14}]$
$[8, 1^8]$	$(1T_1)^8, 8T_2^{+*}$	$16T_{211}^{+*}$	128	$[16, 8, 1^{14}]$
$[8, 1^8]$	$(1T_1)^8, 8T_3^{+*}$	$16T_{325}^{+*}$	128	$[16, 8, 1^{14}]$
$[8, 1^8]$	$(1T_1)^8, 8T_4^{+*}$	$16T_{388}^{+*}$	128	$[16, 8, 1^{14}]$
$[8, 1^8]$	$(1T_1)^8, 8T_5^{+*}$	$16T_{370}^{+*}$	128	$[16, 8, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{26}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{27}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{28}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{29}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{30}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{32}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{34}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{37}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{38}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{41}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{44}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{45}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{46}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{48}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{51}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{52}^{+*}$	32	$[16, 2, 1^{14}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{67}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{68}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{69}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{70}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{71}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{77}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{78}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{85}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{86}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{88}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{90}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{91}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{92}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{94}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{97}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{99}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{100}^{+*}$	64	$[16, 2^2, 1^{13}]$
$G$ : Possible Galois Groups, $D(G)$ : Degrees of factors, $S(G)$ : Galois Groups of factors, $\mathcal{L}(G)$ : Initial Degrees				
$\implies$				

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{101}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{102}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{103}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{104}^*$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{106}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{108}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{112}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{119}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{123}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{127}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{140}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{150}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{152}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{160}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{167}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{170}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{171}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{173}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{174}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{175}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{177}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{208}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{246}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{258}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{261}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{270}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{279}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{292}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{306}^*$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{333}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{364}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{396}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{400}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{403}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^6, 1^4]$	$(1T_1)^4, (2T_1)^6$	$16T_{406}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4, 2^4, 1^4]$	$(1T_1)^4, (2T_1)^4, 4T_2^{+*}$	$16T_{81}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4, 2^4, 1^4]$	$(1T_1)^4, (2T_1)^4, 4T_2^{+*}$	$16T_{109}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4, 2^4, 1^4]$	$(1T_1)^4, (2T_1)^4, 4T_2^{+*}$	$16T_{115}^{+*}$	64	$[16, 4, 1^{14}]$
$[4, 2^4, 1^4]$	$(1T_1)^4, (2T_1)^4, 4T_2^{+*}$	$16T_{157}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{74}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{76}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{96}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{107}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{110}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{113}^{+*}$	64	$[16, 2^2, 1^{13}]$
$G$ : Possible Galois Groups, $D(G)$ : Degrees of factors, $S(G)$ : Galois Groups of factors, $\mathcal{L}(G)$ : Initial Degrees				
$\Rightarrow$				

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{120}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{125}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{129}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{131}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{138}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{153}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{154}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{161}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{163}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{164}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{165}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{172}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{205}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{207}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{215}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{220}^*$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{242}^*$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{251}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{291}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{294}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{303}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{311}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{314}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{321}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{322}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{327}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{334}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{353}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{360}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{513}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{526}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{597}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_1^*)^2$	$16T_{629}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{72}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{73}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{75}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{82}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{84}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{87}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{89}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{93}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{118}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{122}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{126}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{128}^{+*}$	64	$[16, 4, 1^{14}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{130}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{142}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{151}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{155}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{162}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{169}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{198}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{201}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{210}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{217}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{237}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{240}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{245}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{249}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{252}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{253}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{257}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{273}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{274}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{275}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{347}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{350}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{373}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{528}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{540}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{554}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_2^{+*})^2$	$16T_{623}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{209}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{223}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{227}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{235}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{243}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{247}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{248}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{264}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{265}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{271}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{280}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{283}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{293}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{299}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{300}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{302}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{344}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^{*})^2$	$16T_{345}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$G$ : Possible Galois Groups, $D(G)$ : Degrees of factors, $S(G)$ : Galois Groups of factors, $\mathcal{L}(G)$ : Initial Degrees				
$\implies$				

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^*)^2$	$16T_{393}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^*)^2$	$16T_{401}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^*)^2$	$16T_{509}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^*)^2$	$16T_{547}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^*)^2$	$16T_{595}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, (4T_3^*)^2$	$16T_{610}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_1^*$	$16T_{260}^*$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_2^{+*}$	$16T_{225}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_2^{+*}$	$16T_{230}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_2^{+*}$	$16T_{254}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_2^{+*}$	$16T_{337}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_2^{+*}$	$16T_{391}^{+*}$	128	$[16, 8, 1^{14}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_2^{+*}$	$16T_{410}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_3^{+*}$	$16T_{255}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_3^{+*}$	$16T_{390}^{+*}$	128	$[16, 8, 1^{14}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_4^{+*}$	$16T_{376}^{+*}$	128	$[16, 8, 1^{14}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_4^{+*}$	$16T_{382}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_4^{+*}$	$16T_{392}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_4^{+*}$	$16T_{407}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_4^{+*}$	$16T_{408}^{+*}$	128	$[16, 8, 1^{14}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_5^{+*}$	$16T_{338}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_5^{+*}$	$16T_{380}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_7^*$	$16T_{568}^*$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_7^*$	$16T_{580}^*$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_7^*$	$16T_{883}^*$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_9^{+*}$	$16T_{478}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_9^{+*}$	$16T_{511}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_9^{+*}$	$16T_{542}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_9^{+*}$	$16T_{573}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_9^{+*}$	$16T_{602}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_9^{+*}$	$16T_{648}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_9^{+*}$	$16T_{919}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_{10}^{+*}$	$16T_{500}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_{10}^{+*}$	$16T_{590}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_{10}^{+*}$	$16T_{876}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_{11}^{+*}$	$16T_{480}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_{11}^{+*}$	$16T_{484}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_{11}^{+*}$	$16T_{503}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_{11}^{+*}$	$16T_{515}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_{11}^{+*}$	$16T_{527}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_{11}^{+*}$	$16T_{539}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^2, 1^4]$	$(1T_1)^4, (2T_1)^2, 8T_{11}^{+*}$	$16T_{838}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[3^4, 1^4]$	$(1T_1)^4, (3T_1^{+*})^4$	$16T_{57}^{+*}$	48	$[16, 3, 1^{14}]$
$[3^4, 1^4]$	$(1T_1)^4, (3T_1^{+*})^4$	$16T_{58}^{+*}$	48	$[16, 3, 1^{14}]$
$[3^4, 1^4]$	$(1T_1)^4, (3T_1^{+*})^4$	$16T_{59}^{+*}$	48	$[16, 3, 1^{14}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[3^4, 1^4]$	$(1T_1)^4, (3T_1^{+*})^4$	$16T_{60}^{+*}$	48	$[16, 3, 1^{14}]$
$[3^4, 1^4]$	$(1T_1)^4, (3T_1^{+*})^4$	$16T_{61}^{+*}$	48	$[16, 3, 1^{14}]$
$[3^4, 1^4]$	$(1T_1)^4, (3T_1^{+*})^4$	$16T_{62}^{+*}$	48	$[16, 3, 1^{14}]$
$[3^4, 1^4]$	$(1T_1)^4, (3T_1^{+*})^4$	$16T_{65}^{+*}$	48	$[16, 3, 1^{14}]$
$[3^4, 1^4]$	$(1T_1)^4, (3T_1^{+*})^4$	$16T_{66}^{+*}$	48	$[16, 3, 1^{14}]$
$[3^4, 1^4]$	$(1T_1)^4, (3T_2^*)^4$	$16T_{181}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[3^4, 1^4]$	$(1T_1)^4, (3T_2^*)^4$	$16T_{182}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{453}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{506}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{507}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{521}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{551}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{555}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{556}^*$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{563}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{564}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{571}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{578}^*$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{805}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{888}^*$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{894}^*$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{898}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{1192}^*$	1024	$[16, 4^3, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_1^*)^3$	$16T_{1202}^*$	1024	$[16, 4^3, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, 4T_1^*, (4T_3^*)^2$	$16T_{673}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, 4T_1^*, (4T_3^*)^2$	$16T_{675}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{83}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{98}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{159}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{206}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{228}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{259}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{323}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{448}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{465}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{470}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{473}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{485}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{502}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{531}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{533}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{581}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{807}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{903}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{911}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{925}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{1152}^{+*}$	1024	$[16, 4^3, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, (4T_2^{+*})^3$	$16T_{1224}^{+*}$	1024	$[16, 4^3, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, 4T_2^{+*}, (4T_3^*)^2$	$16T_{330}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, 4T_2^{+*}, (4T_3^*)^2$	$16T_{339}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, 4T_2^{+*}, (4T_3^*)^2$	$16T_{405}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, 4T_2^{+*}, (4T_3^*)^2$	$16T_{409}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 1^4]$	$(1T_1)^4, 4T_2^{+*}, (4T_3^*)^2$	$16T_{701}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 1^4]$	$(1T_1)^4, 4T_2^{+*}, (4T_3^*)^2$	$16T_{707}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_1^*$	$16T_{397}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_1^*$	$16T_{398}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_7^*$	$16T_{504}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_7^*$	$16T_{576}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_7^*$	$16T_{601}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_7^*$	$16T_{627}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_7^*$	$16T_{845}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{11}^{+*}$	$16T_{928}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{873}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{890}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{929}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{941}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{951}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{961}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{986}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{997}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{1106}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{1120}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{1140}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{1165}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_1^*, 8T_{17}^{+*}$	$16T_{1432}^{+*}$	2048	$[16, 8, 4^2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_4^{+*}$	$16T_{389}^{+*}$	128	$[16, 8, 1^{14}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_9^{+*}$	$16T_{510}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_9^{+*}$	$16T_{633}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_9^{+*}$	$16T_{689}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_9^{+*}$	$16T_{700}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_9^{+*}$	$16T_{878}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{10}^{+*}$	$16T_{487}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{10}^{+*}$	$16T_{489}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{10}^{+*}$	$16T_{532}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{10}^{+*}$	$16T_{644}^{+*}$	256	$[16, 4^2, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{10}^{+*}$	$16T_{893}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{902}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{907}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{912}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{938}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$G$ : Possible Galois Groups, $D(G)$ : Degrees of factors, $S(G)$ : Galois Groups of factors, $\mathcal{L}(G)$ : Initial Degrees				
$\implies$				

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{940}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{964}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{969}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{1025}^{+*}$	512	$[16, 8, 4, 1^{13}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{1116}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{1174}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{1177}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{1178}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 1^4]$	$(1T_1)^4, 4T_2^{+*}, 8T_{18}^{+*}$	$16T_{1340}^{+*}$	2048	$[16, 8, 4^2, 1^{12}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_2^*)^2$	$16T_{188}^{+*}$	96	$[16, 6, 1^{14}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_2^*)^2$	$16T_{189}^{+*}$	96	$[16, 6, 1^{14}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_4^{+*})^2$	$16T_{423}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_4^{+*})^2$	$16T_{424}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_4^{+*})^2$	$16T_{426}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_4^{+*})^2$	$16T_{427}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_4^{+*})^2$	$16T_{438}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_4^{+*})^2$	$16T_{439}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_4^{+*})^2$	$16T_{441}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_4^{+*})^2$	$16T_{442}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_4^{+*})^2$	$16T_{445}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_4^{+*})^2$	$16T_{446}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_6^*)^2$	$16T_{717}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_6^*)^2$	$16T_{722}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_6^*)^2$	$16T_{729}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_6^*)^2$	$16T_{732}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_6^*)^2$	$16T_{737}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_6^*)^2$	$16T_{752}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_7^{+*})^2$	$16T_{736}^{+*}$	384	$[16, 6, 4, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_7^{+*})^2$	$16T_{747}^{+*}$	384	$[16, 6, 4, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_7^{+*})^2$	$16T_{749}^{+*}$	384	$[16, 6, 4, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_7^{+*})^2$	$16T_{763}^{+*}$	384	$[16, 6, 4, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_8^*)^2$	$16T_{739}^{+*}$	384	$[16, 6, 4, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_8^*)^2$	$16T_{740}^{+*}$	384	$[16, 6, 4, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_8^*)^2$	$16T_{741}^{+*}$	384	$[16, 6, 4, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_8^*)^2$	$16T_{743}^{+*}$	384	$[16, 6, 4, 1^{13}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_{11}^*)^2$	$16T_{1045}^{+*}$	768	$[16, 6, 4, 2, 1^{12}]$
$[6^2, 1^4]$	$(1T_1)^4, (6T_{11}^*)^2$	$16T_{1046}^{+*}$	768	$[16, 6, 4, 2, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_4^{+*}$	$16T_{437}^{+*}$	192	$[16, 12, 1^{14}]$
$[12, 1^4]$	$(1T_1)^4, 12T_9^{+*}$	$16T_{770}^{+*}$	384	$[16, 12, 2, 1^{13}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{21}^{+*}$	$16T_{1066}^{+*}$	768	$[16, 12, 2^2, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{30}^*$	$16T_{1064}^*$	768	$[16, 12, 2^2, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{31}^{+*}$	$16T_{1072}^{+*}$	768	$[16, 12, 4, 1^{13}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{32}^{+*}$	$16T_{1071}^{+*}$	768	$[16, 12, 4, 1^{13}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{55}^{+*}$	$16T_{1308}^{+*}$	1536	$[16, 12, 4, 2, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{56}^{+*}$	$16T_{1305}^{+*}$	1536	$[16, 12, 4, 2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$



## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[12, 1^4]$	$(1T_1)^4, 12T_{62}^{+*}$	$16T_{1325}^{+*}$	1536	$[16, 12, 8, 1^{13}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{63}^{+*}$	$16T_{1320}^{+*}$	1536	$[16, 12, 8, 1^{13}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{67}^{+*}$	$16T_{1322}^{+*}$	1536	$[16, 12, 8, 1^{13}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{68}^{+*}$	$16T_{1324}^{+*}$	1536	$[16, 12, 8, 1^{13}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{90}^{+*}$	$16T_{1515}^{+*}$	3072	$[16, 12, 4^2, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{94}^*$	$16T_{1517}^*$	3072	$[16, 12, 4^2, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{95}^{+*}$	$16T_{1520}^{+*}$	3072	$[16, 12, 8, 2, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{98}^*$	$16T_{1536}^*$	3072	$[16, 12, 8, 2, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{101}^{+*}$	$16T_{1538}^{+*}$	3072	$[16, 12, 8, 2, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{103}^{+*}$	$16T_{1537}^{+*}$	3072	$[16, 12, 8, 2, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{139}^{+*}$	$16T_{1664}^{+*}$	6144	$[16, 12, 8, 4, 1^{12}]$
$[12, 1^4]$	$(1T_1)^4, 12T_{150}^*$	$16T_{1660}^*$	6144	$[16, 12, 8, 4, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{55}^*$	32	$[16, 2, 1^{14}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{56}^*$	32	$[16, 2, 1^{14}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{197}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{200}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{202}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{203}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{212}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{231}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{241}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{266}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{268}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{272}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{278}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{284}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{288}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{295}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{301}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{305}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{310}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{313}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{315}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{317}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{324}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{329}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{354}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{358}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{369}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{372}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{394}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{402}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{460}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{463}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{464}^{+*}$	256	$[16, 2^4, 1^{11}]$
$G$ : Possible Galois Groups, $D(G)$ : Degrees of factors, $S(G)$ : Galois Groups of factors, $\mathcal{L}(G)$ : Initial Degrees				
$\implies$				

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{466}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{469}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{476}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{545}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{546}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{559}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{565}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{585}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{586}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{588}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{589}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{591}^*$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{598}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{604}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{607}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{608}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{609}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{612}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{616}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{624}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{632}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{634}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{637}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{643}^*$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{649}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{651}^*$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{656}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{684}^*$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{703}^*$	256	$[16, 2^4, 1^{11}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{794}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{797}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{801}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{815}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{817}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{820}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{829}^*$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{834}^*$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{835}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{841}^*$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{854}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{860}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{958}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{968}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{984}^{+*}$	512	$[16, 2^5, 1^{10}]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{985}^{+*}$	512	$[16, 2^5, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1082}^{+*}$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1102}^{+*}$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1130}^*$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1146}^*$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1171}^{+*}$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1187}^*$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1194}^{+*}$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1197}^{+*}$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1210}^*$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1221}^*$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1223}^*$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1229}^*$	1024	$[16, 2^6, 1^9]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1351}^*$	2048	$[16, 2^7, 1^8]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1378}^*$	2048	$[16, 2^7, 1^8]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1379}^*$	2048	$[16, 2^7, 1^8]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1461}^*$	2048	$[16, 2^7, 1^8]$
$[2^7, 1^2]$	$(1T_1)^2, (2T_1)^7$	$16T_{1484}^*$	2048	$[16, 2^7, 1^8]$
$[4, 2^5, 1^2]$	$(1T_1)^2, (2T_1)^5, 4T_2^{+*}$	$16T_{80}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4, 2^5, 1^2]$	$(1T_1)^2, (2T_1)^5, 4T_2^{+*}$	$16T_{116}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4, 2^5, 1^2]$	$(1T_1)^2, (2T_1)^5, 4T_2^{+*}$	$16T_{132}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4, 2^5, 1^2]$	$(1T_1)^2, (2T_1)^5, 4T_2^{+*}$	$16T_{133}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{136}^*$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{156}^*$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{199}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{219}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{229}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{233}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{286}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{304}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{316}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{318}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{320}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{326}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{368}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{383}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{384}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{495}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{508}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{569}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_1^*)^2$	$16T_{594}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{134}^*$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{135}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{144}^*$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{145}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{146}^{+*}$	64	$[16, 2^2, 1^{13}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{147}^{+*}$	64	$[16, 2^2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{204}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{232}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{263}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{267}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{282}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{285}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{290}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{298}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{307}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{312}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{331}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{411}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{412}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{475}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{496}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{550}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_2^{+*})^2$	$16T_{561}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{213}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{216}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{222}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{224}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{226}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{234}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{236}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{238}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{239}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{244}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{250}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{262}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{269}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{281}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{287}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{296}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{309}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{328}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{335}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{336}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{340}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{342}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{343}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{346}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{356}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{359}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^{*})^2$	$16T_{363}^{+*}$	128	$[16, 4, 2, 1^{13}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{377}^*$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{378}^*$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{413}^*$	128	$[16, 4, 2, 1^{13}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{449}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{450}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{451}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{452}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{456}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{458}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{459}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{461}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{462}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{467}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{468}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{471}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{490}^*$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{491}^*$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{512}^*$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{535}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{549}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{574}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{579}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{584}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{592}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{596}^*$	256	$[16, 2^4, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{599}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{606}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{613}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{614}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{615}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{618}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{621}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{626}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{628}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{635}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{638}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{639}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{641}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{642}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{645}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{646}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{647}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{650}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{652}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{653}^*$	256	$[16, 4, 2^2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{654}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{657}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{660}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{663}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{665}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{671}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{779}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{780}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{781}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{783}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{787}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{788}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{791}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{796}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{799}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{803}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{804}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{810}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{811}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{812}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{813}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{821}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{822}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{825}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{826}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{828}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{832}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{833}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{836}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{840}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{846}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{848}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{849}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{850}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{853}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{869}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{881}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{884}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{886}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{896}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{913}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{915}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{916}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{917}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{920}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{926}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{935}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{944}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{948}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{952}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{953}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{963}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{966}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{970}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{982}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{988}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{991}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{996}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1000}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1008}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1010}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1013}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1015}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1021}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1023}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1024}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1086}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1094}^{+*}$	1024	$[16, 2^6, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1095}^{+*}$	1024	$[16, 2^6, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1098}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1122}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1123}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1125}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1132}^*$	1024	$[16, 2^6, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1136}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1141}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1147}^*$	1024	$[16, 2^6, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1148}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1162}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1167}^*$	1024	$[16, 2^6, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1175}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1183}^{+*}$	1024	$[16, 2^6, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1184}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1198}^*$	1024	$[16, 2^6, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1200}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1204}^{+*}$	1024	$[16, 2^6, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1220}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1228}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1236}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1238}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1241}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1242}^{+*}$	1024	$[16, 2^6, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1245}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1246}^{+*}$	1024	$[16, 2^6, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1335}^{+*}$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1336}^{+*}$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1369}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1370}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1372}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1381}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1391}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1392}^{+*}$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1405}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1406}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1414}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1420}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1424}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1427}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1428}^{+*}$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1463}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1479}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1481}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1577}^*$	4096	$[16, 4, 2^6, 1^8]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1590}^*$	4096	$[16, 4, 2^6, 1^8]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1604}^*$	4096	$[16, 4, 2^6, 1^8]$
$[4^2, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, (4T_3^*)^2$	$16T_{1616}^*$	4096	$[16, 4, 2^6, 1^8]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_1^*$	$16T_{361}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_1^*$	$16T_{387}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_2^{+*}$	$16T_{218}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_2^{+*}$	$16T_{221}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_2^{+*}$	$16T_{276}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_2^{+*}$	$16T_{366}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_3^{+*}$	$16T_{214}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_3^{+*}$	$16T_{277}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_3^{+*}$	$16T_{349}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_4^{+*}$	$16T_{352}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_4^{+*}$	$16T_{367}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_4^{+*}$	$16T_{379}^*$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_4^{+*}$	$16T_{386}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_4^{+*}$	$16T_{404}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_5^{+*}$	$16T_{332}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_5^{+*}$	$16T_{351}^*$	128	$[16, 4, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_5^{+*}$	$16T_{357}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_5^{+*}$	$16T_{381}^{+*}$	128	$[16, 2^3, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_6^*$	$16T_{664}^*$	256	$[16, 8, 2, 1^{13}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$



## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_6^*$	$16T_{679}^*$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_6^*$	$16T_{688}^*$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_6^*$	$16T_{696}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_6^*$	$16T_{972}^*$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_7^*$	$16T_{678}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_7^*$	$16T_{697}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_7^*$	$16T_{885}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_8^*$	$16T_{674}^{+*}$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_8^*$	$16T_{687}^*$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_8^*$	$16T_{694}^*$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_8^*$	$16T_{704}^*$	256	$[16, 8, 2, 1^{13}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_8^*$	$16T_{979}^*$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{472}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{474}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{479}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{481}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{486}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{488}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{492}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{505}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{522}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{536}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{537}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{538}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{560}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{617}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{861}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_9^{+*}$	$16T_{879}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{10}^{+*}$	$16T_{698}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{10}^{+*}$	$16T_{705}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{10}^{+*}$	$16T_{900}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{493}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{516}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{517}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{519}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{529}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{530}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{541}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{552}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{553}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{600}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{625}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{630}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{631}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{636}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{877}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{11}^{+*}$	$16T_{908}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{16}^*$	$16T_{1233}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{16}^*$	$16T_{1240}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{16}^*$	$16T_{1257}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{16}^*$	$16T_{1258}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{16}^*$	$16T_{1373}^*$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{16}^*$	$16T_{1374}^{+*}$	2048	$[16, 4, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{20}^{+*}$	$16T_{1205}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{20}^{+*}$	$16T_{1235}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{20}^{+*}$	$16T_{1264}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{20}^{+*}$	$16T_{1274}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{20}^{+*}$	$16T_{1402}^*$	2048	$[16, 4, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{20}^{+*}$	$16T_{1429}^{+*}$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{21}^*$	$16T_{1410}^{+*}$	2048	$[16, 4, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{21}^*$	$16T_{1425}^*$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{21}^*$	$16T_{1452}^*$	2048	$[16, 4, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{778}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{785}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{786}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{789}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{790}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{792}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{795}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{798}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{800}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{808}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{818}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{819}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{827}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{837}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{839}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{868}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{1087}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{1093}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{1100}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^{+*}$	$16T_{1105}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^*$	$16T_{1252}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^*$	$16T_{1260}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^*$	$16T_{1265}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^*$	$16T_{1271}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^*$	$16T_{1332}^{+*}$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{22}^*$	$16T_{1400}^*$	2048	$[16, 4, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{27}^*$	$16T_{1606}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{27}^*$	$16T_{1614}^{+*}$	4096	$[16, 8, 2^5, 1^9]$
$G$ : Possible Galois Groups, $D(G)$ : Degrees of factors, $S(G)$ : Galois Groups of factors, $\mathcal{L}(G)$ : Initial Degrees				
$\implies$				

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{27}^*$	$16T_{1630}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{27}^*$	$16T_{1635}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{27}^*$	$16T_{1722}^*$	8192	$[16, 8, 2^6, 1^8]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{31}^*$	$16T_{1576}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{31}^*$	$16T_{1581}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{31}^*$	$16T_{1591}^{+*}$	4096	$[16, 8, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{31}^*$	$16T_{1602}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 2^3, 1^2]$	$(1T_1)^2, (2T_1)^3, 8T_{31}^*$	$16T_{1719}^*$	8192	$[16, 8, 2^6, 1^8]$
$[6, 3^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (3T_1^{+*})^2, 6T_1^*$	$16T_{179}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[6, 3^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (3T_1^{+*})^2, 6T_1^*$	$16T_{180}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[6, 3^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (3T_1^{+*})^2, 6T_1^*$	$16T_{192}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[6, 3^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (3T_1^{+*})^2, 6T_1^*$	$16T_{193}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[6, 3^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (3T_2^*)^2, 6T_2^*$	$16T_{186}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[6, 3^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (3T_2^*)^2, 6T_2^*$	$16T_{187}^{+*}$	96	$[16, 6, 1^{14}]$
$[6, 3^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (3T_2^*)^2, 6T_2^*$	$16T_{190}^{+*}$	96	$[16, 6, 1^{14}]$
$[6, 3^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (3T_2^*)^2, 6T_2^*$	$16T_{191}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[6, 3^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (3T_2^*)^2, 6T_3^*$	$16T_{421}^{+*}$	192	$[16, 3, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_1^*)^3$	$16T_{143}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_1^*)^3$	$16T_{148}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_1^*)^3$	$16T_{166}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_1^*)^3$	$16T_{176}^{+*}$	64	$[16, 4, 1^{14}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{454}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{494}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{497}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{501}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{523}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{524}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{525}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{566}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{572}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{575}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{587}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{593}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{611}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{622}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{682}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{686}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{691}^{+*}$	256	$[16, 2^4, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{695}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{802}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{862}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{904}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{910}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{923}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{927}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{932}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{1153}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{1168}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^2$	$16T_{1263}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{308}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{348}^*$	128	$[16, 2^3, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{355}^*$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{362}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{371}^*$	128	$[16, 2^3, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{374}^*$	128	$[16, 2^3, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{375}^*$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{385}^*$	128	$[16, 2^3, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{455}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{457}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{483}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{514}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{518}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{520}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{534}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{557}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{558}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{562}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{567}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{570}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{577}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{603}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{620}^*$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{640}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{659}^*$	256	$[16, 4^2, 1^{13}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{661}^*$	256	$[16, 4^2, 1^{13}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{670}^*$	256	$[16, 2^4, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{676}^*$	256	$[16, 2^4, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{685}^*$	256	$[16, 4^2, 1^{13}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{692}^*$	256	$[16, 4^2, 1^{13}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{806}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{844}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{855}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{856}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{858}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{859}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{889}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{891}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{905}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{922}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{934}^*$	512	$[16, 4, 2^3, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{1020}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{1185}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{1190}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^2$	$16T_{1251}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{395}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{399}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{782}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{784}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{793}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{809}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{852}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{863}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{864}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{939}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{962}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{976}^*$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{977}^*$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{978}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{981}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{990}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{992}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{993}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{999}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1001}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1002}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1004}^*$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1007}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1012}^*$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1018}^*$	512	$[16, 4^2, 2, 1^{12}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1019}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1026}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1083}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1084}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1085}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1089}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1090}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1091}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1092}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1096}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1099}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1104}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1110}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1111}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1114}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1115}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1117}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1118}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1121}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1133}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1138}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1142}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1143}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1144}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1145}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1150}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1151}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1155}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1156}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1157}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1159}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1161}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1163}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1164}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1182}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1186}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1188}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1196}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1199}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1201}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1203}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1206}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1207}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1208}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1209}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1211}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1212}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1216}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1217}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1219}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1222}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1227}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1230}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1231}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1232}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1234}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1237}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1239}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1243}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1244}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1248}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1249}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1250}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1253}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1254}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1266}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1267}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1269}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1272}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1277}^*$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1278}^{+*}$	1024	$[16, 4, 2^4, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1281}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1330}^{+*}$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1331}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1333}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1334}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1339}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1341}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1342}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1343}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1345}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1346}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1349}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1352}^{+*}$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1353}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1354}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1356}^{+*}$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1358}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1359}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1360}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1362}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1364}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1365}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1368}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1371}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1375}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1376}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1383}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1384}^*$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1385}^{+*}$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1388}^*$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1390}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1394}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1395}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1396}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1398}^*$	2048	$[16, 4^3, 2, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1399}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1401}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1404}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1407}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1411}^*$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1415}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1416}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1418}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1419}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1422}^*$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1431}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1435}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1436}^{+*}$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1437}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1438}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1439}^{+*}$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1443}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1453}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1457}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1462}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1465}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1468}^*$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1469}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1470}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1472}^*$	2048	$[16, 4^3, 2, 1^{11}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1486}^{+*}$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1487}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1489}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1490}^*$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1491}^{+*}$	2048	$[16, 4, 2^5, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1547}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1548}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1549}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1550}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1551}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1552}^*$	4096	$[16, 4^3, 2^2, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1555}^{+*}$	4096	$[16, 4^3, 2^2, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1557}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1560}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1562}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1564}^*$	4096	$[16, 4^3, 2^2, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1566}^{+*}$	4096	$[16, 4^3, 2^2, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1573}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1580}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1582}^*$	4096	$[16, 4^3, 2^2, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1583}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1584}^*$	4096	$[16, 4^3, 2^2, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1585}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1586}^*$	4096	$[16, 4^3, 2^2, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1588}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1594}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1595}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1596}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1608}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1609}^{+*}$	4096	$[16, 4^3, 2^2, 1^{10}]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1610}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1621}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1626}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1632}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1638}^*$	4096	$[16, 4, 2^6, 1^8]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1643}^*$	4096	$[16, 4, 2^6, 1^8]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1695}^*$	8192	$[16, 4^3, 2^3, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1696}^*$	8192	$[16, 4^2, 2^5, 1^8]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1697}^{+*}$	8192	$[16, 4^3, 2^3, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1703}^*$	8192	$[16, 4^2, 2^5, 1^8]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1705}^*$	8192	$[16, 4^3, 2^3, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1716}^*$	8192	$[16, 4^3, 2^3, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1720}^{+*}$	8192	$[16, 4^3, 2^3, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1721}^*$	8192	$[16, 4^3, 2^3, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1723}^*$	8192	$[16, 4^2, 2^5, 1^8]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1726}^*$	8192	$[16, 4^2, 2^5, 1^8]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1729}^*$	8192	$[16, 4^3, 2^3, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1732}^*$	8192	$[16, 4^3, 2^3, 1^9]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1769}^*$	16384	$[16, 4^3, 2^4, 1^8]$
$[4^3, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^3$	$16T_{1771}^*$	16384	$[16, 4^3, 2^4, 1^8]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_2^{+*}$	$16T_{297}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_2^{+*}$	$16T_{319}^{+*}$	128	$[16, 4, 2, 1^{13}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_9^{+*}$	$16T_{921}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{10}^{+*}$	$16T_{543}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{10}^{+*}$	$16T_{544}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{10}^{+*}$	$16T_{582}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{10}^{+*}$	$16T_{583}^{+*}$	256	$[16, 4, 2^2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{10}^{+*}$	$16T_{887}^{+*}$	512	$[16, 4, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{847}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{865}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{901}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{924}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{949}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{950}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{956}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{973}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{1134}^{+*}$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{1158}^{+*}$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{1218}^{+*}$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{1247}^{+*}$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_1^*, 8T_{19}^{+*}$	$16T_{1361}^{+*}$	2048	[16, 8, 2 <sup>4</sup> , 1 <sup>10</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_2^{+*}$	$16T_{256}^*$	128	[16, 4, 2, 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_6^*$	$16T_{658}^*$	256	[16, 4 <sup>2</sup> , 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_6^*$	$16T_{677}^*$	256	[16, 4 <sup>2</sup> , 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_6^*$	$16T_{690}^*$	256	[16, 4 <sup>2</sup> , 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_6^*$	$16T_{693}^*$	256	[16, 4 <sup>2</sup> , 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_6^*$	$16T_{967}^*$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_7^*$	$16T_{548}^{+*}$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_7^*$	$16T_{605}^{+*}$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_7^*$	$16T_{619}^{+*}$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_7^*$	$16T_{655}^{+*}$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_7^*$	$16T_{831}^{+*}$	512	[16, 4, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_8^*$	$16T_{668}^*$	256	[16, 4 <sup>2</sup> , 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_8^*$	$16T_{669}^{+*}$	256	[16, 4 <sup>2</sup> , 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_8^*$	$16T_{683}^*$	256	[16, 4 <sup>2</sup> , 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_8^*$	$16T_{706}^*$	256	[16, 4 <sup>2</sup> , 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_8^*$	$16T_{1005}^*$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{11}^{+*}$	$16T_{498}^*$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{11}^{+*}$	$16T_{499}^*$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{11}^{+*}$	$16T_{666}^*$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{11}^{+*}$	$16T_{667}^*$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{11}^{+*}$	$16T_{931}^*$	512	[16, 4, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{814}^*$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{816}^*$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{851}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{866}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{870}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{882}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{892}^*$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{909}^*$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{942}^*$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{943}^*$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{959}^*$	512	[16, 8, 4, 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{980}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{987}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{994}^*$	512	[16, 8, 4, 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1003}^*$	512	[16, 8, 4, 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1006}^*$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1022}^*$	512	[16, 8, 4, 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1137}^{+*}$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1149}^*$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1160}^*$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1166}^*$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1173}^*$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1179}^{+*}$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1181}^*$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1193}^*$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_2^{+*}, 8T_{15}^*$	$16T_{1348}^*$	2048	[16, 8, 2 <sup>4</sup> , 1 <sup>10</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_4^{+*}$	$16T_{341}^{+*}$	128	[16, 4, 2, 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_4^{+*}$	$16T_{365}^{+*}$	128	[16, 4, 2, 1 <sup>13</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_6^*$	$16T_{662}^{+*}$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_6^*$	$16T_{680}^*$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_8^*$	$16T_{672}^{+*}$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_8^*$	$16T_{681}^*$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_9^{+*}$	$16T_{477}^{+*}$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_9^{+*}$	$16T_{699}^{+*}$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_9^{+*}$	$16T_{1014}^*$	512	[16, 4, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{10}^{+*}$	$16T_{482}^{+*}$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{10}^{+*}$	$16T_{702}^{+*}$	256	[16, 4, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{11}^{+*}$	$16T_{1009}^{+*}$	512	[16, 4, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{15}^*$	$16T_{880}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{15}^*$	$16T_{906}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{15}^*$	$16T_{937}^*$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{15}^*$	$16T_{945}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{15}^*$	$16T_{946}^{+*}$	512	[16, 8, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{15}^*$	$16T_{1109}^*$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{15}^*$	$16T_{1113}^*$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{15}^*$	$16T_{1127}^{+*}$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{15}^*$	$16T_{1170}^*$	1024	[16, 4 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{15}^*$	$16T_{1458}^*$	2048	[16, 8, 2 <sup>4</sup> , 1 <sup>10</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{823}^{+*}$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{857}^{+*}$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{875}^{+*}$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{895}^{+*}$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{918}^{+*}$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{1097}^{+*}$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{1101}^{+*}$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{1255}^*$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{1279}^*$	1024	[16, 8, 2 <sup>3</sup> , 1 <sup>11</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{1377}^*$	2048	[16, 4 <sup>2</sup> , 2 <sup>3</sup> , 1 <sup>10</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{16}^*$	$16T_{1389}^{+*}$	2048	[16, 4 <sup>2</sup> , 2 <sup>3</sup> , 1 <sup>10</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{871}^{+*}$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{899}^{+*}$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{936}^*$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{947}^*$	512	[16, 4 <sup>2</sup> , 2, 1 <sup>12</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{957}^*$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{974}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{975}^*$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{989}^*$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{998}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{1011}^*$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{1108}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{1112}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{1128}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{1225}^*$	1024	$[16, 4^2, 2^2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{17}^*$	$16T_{1477}^*$	2048	$[16, 4^3, 2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{18}^{+*}$	$16T_{830}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{18}^{+*}$	$16T_{843}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{18}^{+*}$	$16T_{897}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{18}^{+*}$	$16T_{960}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{18}^{+*}$	$16T_{965}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{18}^{+*}$	$16T_{1107}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{18}^{+*}$	$16T_{1119}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{18}^{+*}$	$16T_{1131}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{18}^{+*}$	$16T_{1214}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{18}^{+*}$	$16T_{1445}^{+*}$	2048	$[16, 4^3, 2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{867}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{914}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{933}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{954}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{955}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{971}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{983}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{995}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{1016}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{1017}^{+*}$	512	$[16, 8, 2^2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{1126}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{1135}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{1176}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{1213}^{+*}$	1024	$[16, 4^2, 2^2, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{19}^{+*}$	$16T_{1456}^{+*}$	2048	$[16, 8, 2^4, 1^{10}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{824}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{842}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{872}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{874}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{930}^{+*}$	512	$[16, 4^2, 2, 1^{12}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{1088}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{1103}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{1283}^*$	1024	$[16, 8, 2^3, 1^{11}]$
[8, 4, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{1284}^*$	1024	$[16, 8, 2^3, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{1393}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{20}^{+*}$	$16T_{1403}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{21}^*$	$16T_{1355}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{21}^*$	$16T_{1386}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{21}^*$	$16T_{1449}^*$	2048	$[16, 4, 2^5, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{21}^*$	$16T_{1485}^{+*}$	2048	$[16, 4, 2^5, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{22}^{+*}$	$16T_{1139}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{22}^{+*}$	$16T_{1154}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{22}^{+*}$	$16T_{1172}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{22}^{+*}$	$16T_{1215}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{22}^{+*}$	$16T_{1268}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{22}^{+*}$	$16T_{1273}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{22}^{+*}$	$16T_{1282}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{22}^{+*}$	$16T_{1285}^*$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{22}^{+*}$	$16T_{1367}^*$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{22}^{+*}$	$16T_{1412}^{+*}$	2048	$[16, 4^2, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1189}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1191}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1195}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1226}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1259}^*$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1261}^*$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1262}^*$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1280}^*$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1337}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1350}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1366}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1382}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1387}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1397}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1408}^{+*}$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1409}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1430}^*$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1433}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1434}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1440}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1441}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1442}^*$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1444}^*$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1446}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1447}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1448}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1450}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1455}^{+*}$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1466}^*$	2048	$[16, 8, 2^4, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1471}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1480}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1488}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1558}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1561}^{+*}$	4096	$[16, 8, 4^2, 2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1563}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1567}^{+*}$	4096	$[16, 8, 4^2, 2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1569}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1571}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1574}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1597}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1605}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1617}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1622}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1628}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1636}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1640}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1642}^{+*}$	4096	$[16, 8, 4^2, 2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1647}^{+*}$	4096	$[16, 8, 4^2, 2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1708}^{+*}$	8192	$[16, 8, 4^2, 2^2, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{26}^*$	$16T_{1711}^{+*}$	8192	$[16, 4^3, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{27}^*$	$16T_{1568}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{27}^*$	$16T_{1587}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{27}^*$	$16T_{1598}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{27}^*$	$16T_{1599}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{27}^*$	$16T_{1717}^{+*}$	8192	$[16, 4^2, 2^5, 1^8]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{28}^*$	$16T_{1554}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{28}^*$	$16T_{1575}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{28}^*$	$16T_{1578}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{28}^*$	$16T_{1579}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{28}^*$	$16T_{1601}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{28}^*$	$16T_{1611}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{28}^*$	$16T_{1612}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{28}^*$	$16T_{1627}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{28}^*$	$16T_{1699}^{+*}$	8192	$[16, 4^3, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{28}^*$	$16T_{1702}^{+*}$	8192	$[16, 8, 4^2, 2^2, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1124}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1129}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1169}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1180}^{+*}$	1024	$[16, 8, 4, 2, 1^{12}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1256}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1270}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1275}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1276}^{+*}$	1024	$[16, 8, 2^3, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1338}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1344}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1347}^{+*}$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1357}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1363}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1380}^{+*}$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1413}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1417}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1421}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1423}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1426}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1451}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1454}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1459}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1460}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1464}^*$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1467}^{+*}$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1473}^{+*}$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1474}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1475}^*$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1476}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1478}^{+*}$	2048	$[16, 8, 2^4, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1482}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1483}^*$	2048	$[16, 8, 4, 2^2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1553}^{+*}$	4096	$[16, 8, 4^2, 2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1556}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1559}^{+*}$	4096	$[16, 8, 4^2, 2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1565}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1572}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1589}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1593}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1603}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1613}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1623}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1624}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1629}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1637}^*$	4096	$[16, 8, 4^2, 2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1641}^*$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1644}^*$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1646}^*$	4096	$[16, 8, 4^2, 2, 1^{11}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1700}^*$	8192	$[16, 4^3, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{29}^{+*}$	$16T_{1728}^{+*}$	8192	$[16, 8, 4^2, 2^2, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{30}^*$	$16T_{1570}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{30}^*$	$16T_{1592}^{+*}$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{30}^*$	$16T_{1607}^*$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{30}^*$	$16T_{1615}^*$	4096	$[16, 8, 4, 2^3, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{30}^*$	$16T_{1618}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{30}^*$	$16T_{1631}^*$	4096	$[16, 4^2, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{30}^*$	$16T_{1633}^{+*}$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{30}^*$	$16T_{1634}^*$	4096	$[16, 8, 4, 2^3, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{30}^*$	$16T_{1709}^*$	8192	$[16, 4^3, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{30}^*$	$16T_{1712}^*$	8192	$[16, 8, 4^2, 2^2, 1^{10}]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{31}^*$	$16T_{1600}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{31}^*$	$16T_{1619}^{+*}$	4096	$[16, 8, 2^5, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{31}^*$	$16T_{1620}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{31}^*$	$16T_{1625}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{31}^*$	$16T_{1639}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{31}^*$	$16T_{1645}^*$	4096	$[16, 8, 2^5, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{31}^*$	$16T_{1707}^*$	8192	$[16, 8, 2^6, 1^8]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1698}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1701}^{+*}$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1704}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1706}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1710}^{+*}$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1713}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1714}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1715}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1718}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1724}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1725}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1727}^{+*}$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1730}^{+*}$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1731}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1733}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1734}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1735}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1736}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1737}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1738}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1739}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1740}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1741}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1742}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1743}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1744}^{+*}$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1745}^*$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1746}^{+*}$	8192	$[16, 8, 4, 2^4, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1770}^*$	16384	$[16, 8, 4^2, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1772}^{+*}$	16384	$[16, 8, 4^2, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1773}^*$	16384	$[16, 8, 4^2, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1774}^*$	16384	$[16, 8, 4, 2^5, 1^8]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1775}^*$	16384	$[16, 8, 4, 2^5, 1^8]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1776}^*$	16384	$[16, 8, 4, 2^5, 1^8]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1777}^*$	16384	$[16, 8, 4^2, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1778}^*$	16384	$[16, 8, 4, 2^5, 1^8]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1779}^*$	16384	$[16, 8, 4^2, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1780}^*$	16384	$[16, 8, 4^2, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1781}^*$	16384	$[16, 8, 4^2, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1782}^*$	16384	$[16, 8, 4^2, 2^3, 1^9]$
$[8, 4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_3^*, 8T_{35}^*$	$16T_{1823}^*$	32768	$[16, 8, 4^2, 2^4, 1^8]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_2^*, 6T_3^*$	$16T_{422}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{716}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{718}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{720}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{721}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{726}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{728}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{733}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{738}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{751}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{755}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{767}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{772}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{1309}^{+*}$	1536	$[16, 6, 2^4, 1^{10}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_4^{+*}, 6T_6^*$	$16T_{1327}^{+*}$	1536	$[16, 6, 2^4, 1^{10}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1037}^{+*}$	768	$[16, 6, 2^3, 1^{11}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1038}^{+*}$	768	$[16, 6, 2^3, 1^{11}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1040}^{+*}$	768	$[16, 6, 2^3, 1^{11}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1043}^{+*}$	768	$[16, 6, 2^3, 1^{11}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1050}^{+*}$	768	$[16, 6, 2^3, 1^{11}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1069}^{+*}$	768	$[16, 6, 2^3, 1^{11}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1509}^{+*}$	3072	$[16, 6, 2^5, 1^9]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1512}^{+*}$	3072	$[16, 6, 2^5, 1^9]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1522}^{+*}$	3072	$[16, 6, 2^5, 1^9]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1525}^{+*}$	3072	$[16, 6, 2^5, 1^9]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1542}^{+*}$	3072	$[16, 6, 2^5, 1^9]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1658}^*$	6144	$[16, 6, 2^6, 1^8]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1670}^*$	6144	$[16, 6, 2^6, 1^8]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_6^*)^2$	$16T_{1676}^*$	6144	$[16, 6, 2^6, 1^8]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_8^*$	$16T_{753}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_8^*$	$16T_{754}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_8^*$	$16T_{756}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_8^*$	$16T_{757}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_8^*$	$16T_{760}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_8^*$	$16T_{762}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_8^*$	$16T_{764}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_8^*$	$16T_{768}^{+*}$	384	$[16, 6, 2^2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_{11}^*$	$16T_{1047}^{+*}$	768	$[16, 6, 4, 2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_{11}^*$	$16T_{1049}^{+*}$	768	$[16, 6, 4, 2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_{11}^*$	$16T_{1051}^{+*}$	768	$[16, 6, 4, 2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_{11}^*$	$16T_{1055}^{+*}$	768	$[16, 6, 4, 2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_7^{+*}, 6T_{11}^*$	$16T_{1521}^{+*}$	3072	$[16, 6, 4, 2^3, 1^{10}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_8^*, 6T_{11}^*$	$16T_{1048}^{+*}$	768	$[16, 6, 4, 2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_8^*, 6T_{11}^*$	$16T_{1052}^{+*}$	768	$[16, 6, 4, 2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_8^*, 6T_{11}^*$	$16T_{1054}^{+*}$	768	$[16, 6, 4, 2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_8^*, 6T_{11}^*$	$16T_{1056}^{+*}$	768	$[16, 6, 4, 2, 1^{12}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 6T_8^*, 6T_{11}^*$	$16T_{1523}^{+*}$	3072	$[16, 6, 4, 2^3, 1^{10}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_{11}^*)^2$	$16T_{1044}^{+*}$	768	$[16, 6, 2^3, 1^{11}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_{11}^*)^2$	$16T_{1057}^{+*}$	768	$[16, 6, 2^3, 1^{11}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_{11}^*)^2$	$16T_{1298}^{+*}$	1536	$[16, 6, 4, 2^2, 1^{11}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_{11}^*)^2$	$16T_{1316}^*$	1536	$[16, 6, 2^4, 1^{10}]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_{11}^*)^2$	$16T_{1665}^{+*}$	6144	$[16, 6, 4, 2^4, 1^9]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_{11}^*)^2$	$16T_{1667}^*$	6144	$[16, 6, 4, 2^4, 1^9]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_{11}^*)^2$	$16T_{1675}^*$	6144	$[16, 6, 4, 2^4, 1^9]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_{11}^*)^2$	$16T_{1680}^*$	6144	$[16, 6, 4, 2^4, 1^9]$
$[6^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (6T_{11}^*)^2$	$16T_{1759}^*$	12288	$[16, 6, 4, 2^5, 1^8]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_8^*$	$16T_{775}^{+*}$	384	$[16, 12, 2, 1^{13}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_9^{+*}$	$16T_{773}^*$	384	$[16, 6, 2^2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{21}^{+*}$	$16T_{1060}^*$	768	$[16, 6, 2^3, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{30}^*$	$16T_{1061}^{+*}$	768	$[16, 6, 2^3, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{50}^*$	$16T_{1310}^*$	1536	$[16, 12, 2^3, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{50}^*$	$16T_{1311}^{+*}$	1536	$[16, 12, 2^3, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{59}^*$	$16T_{1306}^{+*}$	1536	$[16, 12, 4, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{60}^{+*}$	$16T_{1302}^*$	1536	$[16, 12, 4, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{61}^*$	$16T_{1303}^{+*}$	1536	$[16, 12, 4, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{64}^*$	$16T_{1319}^{+*}$	1536	$[16, 12, 4, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{65}^{+*}$	$16T_{1326}^*$	1536	$[16, 12, 4, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{66}^*$	$16T_{1323}^{+*}$	1536	$[16, 12, 4, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{88}^*$	$16T_{1513}^{+*}$	3072	$[16, 12, 4, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{88}^*$	$16T_{1546}^{+*}$	3072	$[16, 12, 4, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{89}^{+*}$	$16T_{1518}^*$	3072	$[16, 12, 4, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{92}^*$	$16T_{1510}^{+*}$	3072	$[16, 12, 4, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{92}^*$	$16T_{1543}^{+*}$	3072	$[16, 12, 4, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{93}^*$	$16T_{1544}^{+*}$	3072	$[16, 12, 2^4, 1^{10}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{96}^*$	$16T_{1541}^{+*}$	3072	$[16, 12, 4, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{97}^{+*}$	$16T_{1527}^*$	3072	$[16, 12, 4, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{99}^*$	$16T_{1511}^{+*}$	3072	$[16, 12, 4, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{100}^*$	$16T_{1530}^{+*}$	3072	$[16, 12, 4, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{102}^*$	$16T_{1528}^{+*}$	3072	$[16, 12, 4, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{110}^*$	$16T_{1533}^{+*}$	3072	$[16, 12, 8, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{111}^*$	$16T_{1532}^{+*}$	3072	$[16, 12, 8, 2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{112}^{+*}$	$16T_{1540}^*$	3072	$[16, 12, 8, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{113}^{+*}$	$16T_{1524}^*$	3072	$[16, 12, 8, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{114}^{+*}$	$16T_{1535}^*$	3072	$[16, 12, 8, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{115}^{+*}$	$16T_{1539}^*$	3072	$[16, 12, 8, 2, 1^{12}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{135}^{+*}$	$16T_{1685}^*$	6144	$[16, 12, 2^5, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{135}^*$	$16T_{1692}^*$	6144	$[16, 12, 2^5, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{135}^*$	$16T_{1761}^*$	12288	$[16, 12, 2^6, 1^8]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{137}^{+*}$	$16T_{1659}^*$	6144	$[16, 12, 8, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{137}^*$	$16T_{1687}^*$	6144	$[16, 12, 4, 2^3, 1^{10}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{138}^{+*}$	$16T_{1666}^*$	6144	$[16, 12, 8, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{140}^{+*}$	$16T_{1663}^*$	6144	$[16, 12, 8, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{140}^*$	$16T_{1688}^*$	6144	$[16, 12, 4, 2^3, 1^{10}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{141}^{+*}$	$16T_{1657}^*$	6144	$[16, 12, 4^2, 2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{141}^*$	$16T_{1672}^*$	6144	$[16, 12, 4^2, 2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{142}^{+*}$	$16T_{1656}^*$	6144	$[16, 12, 4^2, 2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{142}^*$	$16T_{1669}^*$	6144	$[16, 12, 4^2, 2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{146}^{+*}$	$16T_{1677}^*$	6144	$[16, 12, 8, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{146}^*$	$16T_{1691}^*$	6144	$[16, 12, 4, 2^3, 1^{10}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{147}^{+*}$	$16T_{1674}^*$	6144	$[16, 12, 8, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{148}^{+*}$	$16T_{1683}^*$	6144	$[16, 12, 4^2, 2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{149}^{+*}$	$16T_{1678}^*$	6144	$[16, 12, 8, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{149}^*$	$16T_{1689}^*$	6144	$[16, 12, 4, 2^3, 1^{10}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{151}^{+*}$	$16T_{1679}^*$	6144	$[16, 12, 4^2, 2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{152}^{+*}$	$16T_{1682}^*$	6144	$[16, 12, 8, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{153}^{+*}$	$16T_{1661}^*$	6144	$[16, 12, 8, 2^2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{185}^*$	$16T_{1758}^*$	12288	$[16, 12, 8, 4, 2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{185}^*$	$16T_{1760}^*$	12288	$[16, 12, 4^2, 2^2, 1^{10}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{186}^{+*}$	$16T_{1757}^*$	12288	$[16, 12, 8, 4, 2, 1^{11}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{186}^*$	$16T_{1764}^*$	12288	$[16, 12, 4^2, 2^2, 1^{10}]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{188}^{+*}$	$16T_{1767}^*$	12288	$[16, 12, 4, 2^4, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{188}^*$	$16T_{1810}^*$	24576	$[16, 12, 4, 2^5, 1^8]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{222}^{+*}$	$16T_{1809}^*$	24576	$[16, 12, 4^2, 2^3, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{222}^*$	$16T_{1811}^*$	24576	$[16, 12, 4^2, 2^3, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{222}^*$	$16T_{1845}^*$	49152	$[16, 12, 4^2, 2^4, 1^8]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{224}^{+*}$	$16T_{1816}^*$	24576	$[16, 12, 8, 2^4, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{224}^*$	$16T_{1817}^*$	24576	$[16, 12, 8, 2^4, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{224}^*$	$16T_{1849}^*$	49152	$[16, 12, 8, 2^5, 1^8]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{227}^{+*}$	$16T_{1815}^*$	24576	$[16, 12, 8, 2^4, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{227}^*$	$16T_{1818}^*$	24576	$[16, 12, 8, 2^4, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{227}^*$	$16T_{1848}^*$	49152	$[16, 12, 8, 2^5, 1^8]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{250}^{+*}$	$16T_{1847}^*$	49152	$[16, 12, 8, 4, 2^3, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{250}^*$	$16T_{1850}^*$	49152	$[16, 12, 8, 4, 2^3, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{250}^*$	$16T_{1851}^*$	49152	$[16, 12, 8, 4, 2^3, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{250}^{+*}$	$16T_{1852}^*$	49152	$[16, 12, 8, 4, 2^3, 1^9]$
$[12, 2, 1^2]$	$(1T_1)^2, 2T_1, 12T_{250}^*$	$16T_{1879}^*$	98304	$[16, 12, 8, 4, 2^4, 1^8]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, (4T_4^{+*})^2$	$16T_{416}^{+*}$	192	$[16, 4, 3, 1^{13}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, (4T_4^{+*})^2$	$16T_{418}^{+*}$	192	$[16, 4, 3, 1^{13}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, (4T_4^{+*})^2$	$16T_{429}^{+*}$	192	$[16, 4, 3, 1^{13}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, (4T_4^{+*})^2$	$16T_{434}^{+*}$	192	$[16, 4, 3, 1^{13}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, (4T_4^{+*})^2$	$16T_{435}^{+*}$	192	$[16, 4, 3, 1^{13}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, (4T_4^{+*})^2$	$16T_{1027}^{+*}$	576	$[16, 4, 3^2, 1^{12}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, (4T_4^{+*})^2$	$16T_{1028}^{+*}$	576	$[16, 4, 3^2, 1^{12}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, (4T_4^{+*})^2$	$16T_{1031}^{+*}$	576	$[16, 4, 3^2, 1^{12}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, (4T_4^{+*})^2$	$16T_{1032}^{+*}$	576	$[16, 4, 3^2, 1^{12}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (4T_5^*)^2$	$16T_{724}^{+*}$	384	$[16, 4, 3, 2, 1^{12}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (4T_5^*)^2$	$16T_{725}^{+*}$	384	$[16, 4, 3, 2, 1^{12}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (4T_5^*)^2$	$16T_{1287}^{+*}$	1152	$[16, 4, 3^2, 2, 1^{11}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (4T_5^*)^2$	$16T_{1288}^{+*}$	1152	$[16, 4, 3^2, 2, 1^{11}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (4T_5^*)^2$	$16T_{1289}^{+*}$	1152	$[16, 4, 3^2, 2, 1^{11}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (4T_5^*)^2$	$16T_{1290}^{+*}$	1152	$[16, 4, 3^2, 2, 1^{11}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (4T_5^*)^2$	$16T_{1295}^{+*}$	1152	$[16, 4, 3^2, 2, 1^{11}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (4T_5^*)^2$	$16T_{1494}^{+*}$	2304	$[16, 4, 3^2, 2^2, 1^{10}]$
$[4^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (4T_5^*)^2$	$16T_{1497}^{+*}$	2304	$[16, 4, 3^2, 2^2, 1^{10}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, 8T_{12}^{+*}$	$16T_{730}^{+*}$	384	$[16, 8, 3, 1^{13}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, 8T_{12}^{+*}$	$16T_{774}^{+*}$	384	$[16, 8, 3, 1^{13}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, 8T_{12}^{+*}$	$16T_{1291}^{+*}$	1152	$[16, 8, 3^2, 1^{12}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, 8T_{13}^{+*}$	$16T_{719}^{+*}$	384	$[16, 8, 3, 1^{13}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, 8T_{13}^{+*}$	$16T_{765}^{+*}$	384	$[16, 8, 3, 1^{13}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, 8T_{13}^{+*}$	$16T_{1286}^{+*}$	1152	$[16, 8, 3^2, 1^{12}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_1^{+*})^2, 8T_{14}^{+*}$	$16T_{1296}^{+*}$	1152	$[16, 8, 3^2, 1^{12}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, 8T_{13}^{+*}$	$16T_{1292}^{+*}$	1152	$[16, 4, 3^2, 2, 1^{11}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, 8T_{14}^{+*}$	$16T_{742}^{+*}$	384	$[16, 4, 3, 2, 1^{12}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, 8T_{14}^{+*}$	$16T_{744}^{+*}$	384	$[16, 4, 3, 2, 1^{12}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, 8T_{14}^{+*}$	$16T_{1293}^{+*}$	1152	$[16, 4, 3^2, 2, 1^{11}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, 8T_{24}^{+*}$	$16T_{1053}^{+*}$	768	$[16, 8, 3, 2, 1^{12}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, 8T_{24}^{+*}$	$16T_{1493}^{+*}$	2304	$[16, 8, 3^2, 2, 1^{11}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, 8T_{24}^{+*}$	$16T_{1495}^{+*}$	2304	$[16, 8, 3^2, 2, 1^{11}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, 8T_{24}^{+*}$	$16T_{1496}^{+*}$	2304	$[16, 8, 3^2, 2, 1^{11}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, 8T_{24}^{+*}$	$16T_{1498}^{+*}$	2304	$[16, 8, 3^2, 2, 1^{11}]$
$[8, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, 8T_{24}^{+*}$	$16T_{1648}^{+*}$	4608	$[16, 8, 3^2, 2^2, 1^{10}]$
$[6, 4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2, 6T_4^{+*}$	$16T_{425}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6, 4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2, 6T_4^{+*}$	$16T_{428}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6, 4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2, 6T_4^{+*}$	$16T_{443}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6, 4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2, 6T_4^{+*}$	$16T_{444}^{+*}$	192	$[16, 6, 2, 1^{13}]$
$[6, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, 6T_7^{+*}$	$16T_{748}^{+*}$	384	$[16, 6, 4, 1^{13}]$
$[6, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, 6T_7^{+*}$	$16T_{759}^{+*}$	384	$[16, 6, 4, 1^{13}]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_2^*, 8T_{23}^*$	$16T_{1067}^{+*}$	768	$[16, 8, 6, 1^{13}]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_2^*, 8T_{23}^*$	$16T_{1499}^*$	2304	$[16, 8, 6, 3, 1^{12}]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_2^*, 8T_{23}^*$	$16T_{1500}^*$	2304	$[16, 8, 6, 3, 1^{12}]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_2^*, 8T_{23}^*$	$16T_{1651}^*$	4608	$[16, 8, 6^2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{12}^{+*}$	$16T_{734}^{+*}$	384	[16, 6, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{12}^{+*}$	$16T_{735}^{+*}$	384	[16, 6, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{12}^{+*}$	$16T_{771}^{+*}$	384	[16, 6, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{13}^{+*}$	$16T_{723}^{+*}$	384	[16, 6, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{13}^{+*}$	$16T_{727}^{+*}$	384	[16, 6, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{13}^{+*}$	$16T_{750}^{+*}$	384	[16, 6, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{32}^{+*}$	$16T_{1304}^{+*}$	1536	[16, 8, 6, 2, 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{32}^{+*}$	$16T_{1307}^{+*}$	1536	[16, 8, 6, 2, 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{32}^{+*}$	$16T_{1318}^{+*}$	1536	[16, 8, 6, 2, 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{32}^{+*}$	$16T_{1321}^{+*}$	1536	[16, 8, 6, 2, 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{32}^{+*}$	$16T_{1671}^{+*}$	6144	[16, 8, 6, 2 <sup>3</sup> , 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{32}^{+*}$	$16T_{1686}^{+*}$	6144	[16, 8, 6, 2 <sup>3</sup> , 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_4^{+*}, 8T_{32}^{+*}$	$16T_{1791}^{+*}$	18432	[16, 8, 6 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_6^*, 8T_{38}^*$	$16T_{1754}^*$	12288	[16, 8, 6, 2 <sup>4</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_6^*, 8T_{38}^*$	$16T_{1755}^*$	12288	[16, 8, 6, 2 <sup>4</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_6^*, 8T_{38}^*$	$16T_{1762}^*$	12288	[16, 8, 6, 2 <sup>4</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_6^*, 8T_{38}^*$	$16T_{1766}^*$	12288	[16, 8, 6, 2 <sup>4</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_6^*, 8T_{38}^*$	$16T_{1806}^*$	24576	[16, 8, 6, 2 <sup>5</sup> , 1 <sup>8</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_6^*, 8T_{38}^*$	$16T_{1814}^*$	24576	[16, 8, 6, 2 <sup>5</sup> , 1 <sup>8</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_6^*, 8T_{38}^*$	$16T_{1824}^{+*}$	36864	[16, 8, 6 <sup>2</sup> , 2 <sup>3</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_6^*, 8T_{38}^*$	$16T_{1825}^*$	36864	[16, 8, 6 <sup>2</sup> , 2 <sup>3</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_6^*, 8T_{38}^*$	$16T_{1862}^*$	73728	[16, 8, 6 <sup>2</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_7^{+*}, 8T_{14}^{+*}$	$16T_{758}^{+*}$	384	[16, 6, 4, 1 <sup>13</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_7^{+*}, 8T_{14}^{+*}$	$16T_{766}^{+*}$	384	[16, 6, 4, 1 <sup>13</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_7^{+*}, 8T_{24}^{+*}$	$16T_{1058}^{+*}$	768	[16, 6, 4, 2, 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_7^{+*}, 8T_{39}^{+*}$	$16T_{1534}^{+*}$	3072	[16, 8, 6, 4, 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_7^{+*}, 8T_{39}^{+*}$	$16T_{1765}^{+*}$	12288	[16, 8, 6, 4, 2 <sup>2</sup> , 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_7^{+*}, 8T_{39}^{+*}$	$16T_{1835}^{+*}$	36864	[16, 8, 6 <sup>2</sup> , 4, 2, 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_7^{+*}, 8T_{39}^{+*}$	$16T_{1836}^{+*}$	36864	[16, 8, 6 <sup>2</sup> , 4, 2, 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_7^{+*}, 8T_{39}^{+*}$	$16T_{1868}^{+*}$	73728	[16, 8, 6 <sup>2</sup> , 4 <sup>2</sup> , 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_8^*, 8T_{23}^*$	$16T_{1062}^{+*}$	768	[16, 6, 4, 2, 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_8^*, 8T_{40}^*$	$16T_{1531}^{+*}$	3072	[16, 8, 6, 4, 1 <sup>12</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_8^*, 8T_{40}^*$	$16T_{1763}^{+*}$	12288	[16, 8, 6, 4, 2 <sup>2</sup> , 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_8^*, 8T_{40}^*$	$16T_{1832}^*$	36864	[16, 8, 6 <sup>2</sup> , 4, 2, 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_8^*, 8T_{40}^*$	$16T_{1837}^{+*}$	36864	[16, 8, 6 <sup>2</sup> , 4, 2, 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_8^*, 8T_{40}^*$	$16T_{1871}^*$	73728	[16, 8, 6 <sup>2</sup> , 4 <sup>2</sup> , 1 <sup>10</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1807}^*$	24576	[16, 8, 6, 4, 2 <sup>3</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1808}^{+*}$	24576	[16, 8, 6, 4, 2 <sup>3</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1812}^*$	24576	[16, 8, 6, 4, 2 <sup>3</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1813}^*$	24576	[16, 8, 6, 4, 2 <sup>3</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1846}^*$	49152	[16, 8, 6, 4, 2 <sup>4</sup> , 1 <sup>8</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1863}^*$	73728	[16, 8, 6 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1865}^{+*}$	73728	[16, 8, 6 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1866}^*$	73728	[16, 8, 6 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>9</sup> ]
[8, 6, 1 <sup>2</sup> ]	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1867}^{+*}$	73728	[16, 8, 6 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>9</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1869}^{+*}$	73728	$[16, 8, 6^2, 4, 2^2, 1^9]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1870}^*$	73728	$[16, 8, 6^2, 4, 2^2, 1^9]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1872}^*$	73728	$[16, 8, 6^2, 4, 2^2, 1^9]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1884}^{+*}$	147456	$[16, 8, 6^2, 4^2, 2, 1^9]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1885}^*$	147456	$[16, 8, 6^2, 4^2, 2, 1^9]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1886}^*$	147456	$[16, 8, 6^2, 4^2, 2, 1^9]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1887}^*$	147456	$[16, 8, 6^2, 4, 2^3, 1^8]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1888}^*$	147456	$[16, 8, 6^2, 4^2, 2, 1^9]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1889}^*$	147456	$[16, 8, 6^2, 4, 2^3, 1^8]$
$[8, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 8T_{44}^*$	$16T_{1905}^*$	294912	$[16, 8, 6^2, 4^2, 2^2, 1^8]$
$[7^2, 1^2]$	$(1T_1)^2, (7T_1^{+*})^2$	$16T_{196}^{+*}$	112	$[16, 7, 1^{14}]$
$[7^2, 1^2]$	$(1T_1)^2, (7T_3^{+*})^2$	$16T_{712}^{+*}$	336	$[16, 7, 3, 1^{13}]$
$[7^2, 1^2]$	$(1T_1)^2, (7T_3^{+*})^2$	$16T_{713}^+$	336	$[16, 7, 3, 1^{13}]$
$[7^2, 1^2]$	$(1T_1)^2, (7T_3^{+*})^2$	$16T_{714}^+$	336	$[16, 7, 3, 1^{13}]$
$[7^2, 1^2]$	$(1T_1)^2, (7T_3^{+*})^2$	$16T_{715}^+$	336	$[16, 7, 3, 1^{13}]$
$[7^2, 1^2]$	$(1T_1)^2, (7T_4^*)^2$	$16T_{1035}^+$	672	$[16, 7, 6, 1^{13}]$
$[7^2, 1^2]$	$(1T_1)^2, (7T_5^+)^2$	$16T_{1504}^+$	2688	$[16, 7, 6, 4, 1^{12}]$
$[7^2, 1^2]$	$(1T_1)^2, (7T_6^+)^2$	$16T_{1838}^+$	40320	$[16, 7, 6, 5, 4, 3, 1^{10}]$
$[7^2, 1^2]$	$(1T_1)^2, (7T_6^+)^2$	$16T_{1839}^+$	40320	$[16, 7, 6, 5, 4, 3, 1^{10}]$
$[7^2, 1^2]$	$(1T_1)^2, (7T_7^+)^2$	$16T_{1873}^+$	80640	$[16, 7, 6, 5, 4, 3, 2, 1^9]$
$[14, 1^2]$	$(1T_1)^2, 14T_4^*$	$16T_{1036}^+$	672	$[16, 14, 3, 1^{13}]$
$[14, 1^2]$	$(1T_1)^2, 14T_6^{+*}$	$16T_{1076}^{+*}$	896	$[16, 14, 2^2, 1^{12}]$
$[14, 1^2]$	$(1T_1)^2, 14T_6^{+*}$	$16T_{1077}^{+*}$	896	$[16, 14, 2^2, 1^{12}]$
$[14, 1^2]$	$(1T_1)^2, 14T_{10}^+$	$16T_{1507}^+$	2688	$[16, 14, 12, 1^{13}]$
$[14, 1^2]$	$(1T_1)^2, 14T_{11}^{+*}$	$16T_{1503}^{+*}$	2688	$[16, 14, 6, 2, 1^{12}]$
$[14, 1^2]$	$(1T_1)^2, 14T_{11}^{+*}$	$16T_{1506}^+$	2688	$[16, 14, 6, 2, 1^{12}]$
$[14, 1^2]$	$(1T_1)^2, 14T_{21}^{+*}$	$16T_{1694}^{+*}$	7168	$[16, 14, 2^5, 1^9]$
$[14, 1^2]$	$(1T_1)^2, 14T_{29}^*$	$16T_{1768}^*$	14336	$[16, 14, 2^6, 1^8]$
$[14, 1^2]$	$(1T_1)^2, 14T_{33}^+$	$16T_{1805}^+$	21504	$[16, 14, 12, 8, 1^{12}]$
$[14, 1^2]$	$(1T_1)^2, 14T_{34}^+$	$16T_{1804}^+$	21504	$[16, 14, 12, 8, 1^{12}]$
$[14, 1^2]$	$(1T_1)^2, 14T_{35}^{+*}$	$16T_{1800}^{+*}$	21504	$[16, 14, 6, 2^4, 1^9]$
$[14, 1^2]$	$(1T_1)^2, 14T_{35}^{+*}$	$16T_{1803}^+$	21504	$[16, 14, 6, 2^4, 1^9]$
$[14, 1^2]$	$(1T_1)^2, 14T_{40}^*$	$16T_{1843}^*$	43008	$[16, 14, 12, 2^4, 1^9]$
$[14, 1^2]$	$(1T_1)^2, 14T_{41}^{+*}$	$16T_{1842}^+$	43008	$[16, 14, 12, 2^4, 1^9]$
$[14, 1^2]$	$(1T_1)^2, 14T_{44}^*$	$16T_{1841}^*$	43008	$[16, 14, 6, 2^5, 1^8]$
$[14, 1^2]$	$(1T_1)^2, 14T_{44}^*$	$16T_{1844}^*$	43008	$[16, 14, 6, 2^5, 1^8]$
$[14, 1^2]$	$(1T_1)^2, 14T_{48}^*$	$16T_{1878}^*$	86016	$[16, 14, 12, 2^5, 1^8]$
$[14, 1^2]$	$(1T_1)^2, 14T_{50}^+$	$16T_{1902}^+$	172032	$[16, 14, 12, 8, 2^3, 1^9]$
$[14, 1^2]$	$(1T_1)^2, 14T_{51}^+$	$16T_{1916}^+$	344064	$[16, 14, 12, 8, 2^4, 1^8]$
$[14, 1^2]$	$(1T_1)^2, 14T_{53}^+$	$16T_{1938}^+$	2580480	$[16, 14, 12, 10, 8, 6, 2, 1^9]$
$[14, 1^2]$	$(1T_1)^2, 14T_{54}^+$	$16T_{1946}^+$	5160960	$[16, 14, 12, 10, 8, 6, 4, 1^9]$
$[14, 1^2]$	$(1T_1)^2, 14T_{55}^+$	$16T_{1945}^+$	5160960	$[16, 14, 12, 10, 8, 6, 4, 1^9]$
$[14, 1^2]$	$(1T_1)^2, 14T_{56}^+$	$16T_{1944}^+$	5160960	$[16, 14, 12, 10, 8, 6, 2^2, 1^8]$
$[14, 1^2]$	$(1T_1)^2, 14T_{57}^+$	$16T_{1948}^+$	10321920	$[16, 14, 12, 10, 8, 6, 4, 2, 1^8]$
$[3^5, 1]$	$1T_1, (3T_1^{+*})^5$	$16T_{63}^{+*}$	48	$[16, 3, 1^{14}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[3^5, 1]$	$1T_1, (3T_1^{+*})^5$	$16T_{64}^{+*}$	48	$[16, 3, 1^{14}]$
$[6, 3^3, 1]$	$1T_1, (3T_2^*)^3, 6T_2^*$	$16T_{194}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[6, 3^3, 1]$	$1T_1, (3T_2^*)^3, 6T_2^*$	$16T_{195}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[9, 3^2, 1]$	$1T_1, (3T_1^{+*})^2, 9T_2^{+*}$	$16T_{414}^{+*}$	144	$[16, 3^2, 1^{13}]$
$[9, 3^2, 1]$	$1T_1, 3T_1^{+*}, 3T_2^*, 9T_4^*$	$16T_{709}^{+*}$	288	$[16, 3^2, 2, 1^{12}]$
$[9, 3^2, 1]$	$1T_1, (3T_2^*)^2, 9T_5^{+*}$	$16T_{710}^{+*}$	288	$[16, 3^2, 2, 1^{12}]$
$[9, 3^2, 1]$	$1T_1, (3T_2^*)^2, 9T_8^*$	$16T_{1033}^{+*}$	576	$[16, 3^2, 2^2, 1^{11}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{417}^{+*}$	192	$[16, 4, 3, 1^{13}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{432}^{+*}$	192	$[16, 4, 3, 1^{13}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1039}^{+*}$	768	$[16, 4^2, 3, 1^{12}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1041}^{+*}$	768	$[16, 4^2, 3, 1^{12}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1065}^{+*}$	768	$[16, 4^2, 3, 1^{12}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1068}^{+*}$	768	$[16, 4^2, 3, 1^{12}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1514}^{+*}$	3072	$[16, 4^3, 3, 1^{11}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1516}^{+*}$	3072	$[16, 4^3, 3, 1^{11}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1526}^{+*}$	3072	$[16, 4^3, 3, 1^{11}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1529}^{+*}$	3072	$[16, 4^3, 3, 1^{11}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1747}^{+*}$	9216	$[16, 4^3, 3^2, 1^{10}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1748}^{+*}$	9216	$[16, 4^3, 3^2, 1^{10}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1751}^{+*}$	9216	$[16, 4^3, 3^2, 1^{10}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1752}^{+*}$	9216	$[16, 4^3, 3^2, 1^{10}]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1819}^{+*}$	27648	$[16, 4^3, 3^3, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1820}^{+*}$	27648	$[16, 4^3, 3^3, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1821}^{+*}$	27648	$[16, 4^3, 3^3, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1822}^{+*}$	27648	$[16, 4^3, 3^3, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1874}^{+*}$	82944	$[16, 4^3, 3^4, 1^8]$
$[4^3, 3, 1]$	$1T_1, 3T_1^{+*}, (4T_4^{+*})^3$	$16T_{1875}^{+*}$	82944	$[16, 4^3, 3^4, 1^8]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1300}^{+*}$	1536	$[16, 4^2, 3, 2, 1^{11}]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1301}^{+*}$	1536	$[16, 4^2, 3, 2, 1^{11}]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1662}^{+*}$	6144	$[16, 4^3, 3, 2, 1^{10}]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1668}^{+*}$	6144	$[16, 4^3, 3, 2, 1^{10}]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1784}^{+*}$	18432	$[16, 4^3, 3^2, 2, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1785}^{+*}$	18432	$[16, 4^3, 3^2, 2, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1786}^{+*}$	18432	$[16, 4^3, 3^2, 2, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1787}^{+*}$	18432	$[16, 4^3, 3^2, 2, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1788}^*$	18432	$[16, 4^3, 3^2, 2, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1792}^{+*}$	18432	$[16, 4^3, 3^2, 2, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1794}^{+*}$	18432	$[16, 4^3, 3^2, 2, 1^9]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1830}^{+*}$	36864	$[16, 4^3, 3^2, 2^2, 1^8]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1831}^{+*}$	36864	$[16, 4^3, 3^2, 2^2, 1^8]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1854}^{+*}$	55296	$[16, 4^3, 3^3, 2, 1^8]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1855}^{+*}$	55296	$[16, 4^3, 3^3, 2, 1^8]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1891}^{+*}$	165888	$[16, 4^3, 3^4, 2, 1^7]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1892}^{+*}$	165888	$[16, 4^3, 3^4, 2, 1^7]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1893}^{+*}$	165888	$[16, 4^3, 3^4, 2, 1^7]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1894}^*$	165888	$[16, 4^3, 3^4, 2, 1^7]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1896}^{+*}$	165888	$[16, 4^3, 3^4, 2, 1^7]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1898}^{+*}$	165888	$[16, 4^3, 3^4, 2, 1^7]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1907}^*$	331776	$[16, 4^3, 3^4, 2^2, 1^6]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1908}^{+*}$	331776	$[16, 4^3, 3^4, 2^2, 1^6]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1911}^{+*}$	331776	$[16, 4^3, 3^4, 2^2, 1^6]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1912}^{+*}$	331776	$[16, 4^3, 3^4, 2^2, 1^6]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1921}^{+*}$	663552	$[16, 4^3, 3^4, 2^3, 1^5]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1925}^*$	663552	$[16, 4^3, 3^4, 2^3, 1^5]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1926}^{+*}$	663552	$[16, 4^3, 3^4, 2^3, 1^5]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1927}^*$	663552	$[16, 4^3, 3^4, 2^3, 1^5]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1932}^*$	1327104	$[16, 4^3, 3^4, 2^4, 1^4]$
$[4^3, 3, 1]$	$1T_1, 3T_2^*, (4T_5^*)^3$	$16T_{1936}^*$	1327104	$[16, 4^3, 3^4, 2^4, 1^4]$
$[8, 4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}, 8T_{33}^{+*}$	$16T_{1299}^{+*}$	1536	$[16, 8, 4, 3, 1^{12}]$
$[8, 4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}, 8T_{33}^{+*}$	$16T_{1315}^{+*}$	1536	$[16, 8, 4, 3, 1^{12}]$
$[8, 4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}, 8T_{33}^{+*}$	$16T_{1655}^{+*}$	6144	$[16, 8, 4^2, 3, 1^{11}]$
$[8, 4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}, 8T_{33}^{+*}$	$16T_{1681}^{+*}$	6144	$[16, 8, 4^2, 3, 1^{11}]$
$[8, 4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}, 8T_{33}^{+*}$	$16T_{1783}^{+*}$	18432	$[16, 8, 4^2, 3^2, 1^{10}]$
$[8, 4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}, 8T_{34}^{+*}$	$16T_{1793}^{+*}$	18432	$[16, 8, 4^2, 3^2, 1^{10}]$
$[8, 4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}, 8T_{42}^{+*}$	$16T_{1853}^{+*}$	55296	$[16, 8, 4^2, 3^3, 1^9]$
$[8, 4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}, 8T_{42}^{+*}$	$16T_{1857}^{+*}$	55296	$[16, 8, 4^2, 3^3, 1^9]$
$[8, 4, 3, 1]$	$1T_1, 3T_1^{+*}, 4T_4^{+*}, 8T_{42}^{+*}$	$16T_{1890}^{+*}$	165888	$[16, 8, 4^2, 3^4, 1^8]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{14}^{+*}$	$16T_{761}^{+*}$	384	$[16, 4, 3, 2, 1^{12}]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{33}^{+*}$	$16T_{1796}^{+*}$	18432	$[16, 4^3, 3^2, 2, 1^9]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{34}^{+*}$	$16T_{1312}^{+*}$	1536	$[16, 4^2, 3, 2, 1^{11}]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{34}^{+*}$	$16T_{1313}^{+*}$	1536	$[16, 4^2, 3, 2, 1^{11}]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{34}^{+*}$	$16T_{1673}^{+*}$	6144	$[16, 4^3, 3, 2, 1^{10}]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{34}^{+*}$	$16T_{1684}^{+*}$	6144	$[16, 4^3, 3, 2, 1^{10}]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{34}^{+*}$	$16T_{1795}^{+*}$	18432	$[16, 4^3, 3^2, 2, 1^9]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{41}^{+*}$	$16T_{1519}^{+*}$	3072	$[16, 8, 4, 3, 2, 1^{11}]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{41}^{+*}$	$16T_{1756}^{+*}$	12288	$[16, 8, 4^2, 3, 2, 1^{10}]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{41}^{+*}$	$16T_{1826}^{+*}$	36864	$[16, 8, 4^2, 3^2, 2, 1^9]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{41}^{+*}$	$16T_{1827}^{+*}$	36864	$[16, 8, 4^2, 3^2, 2, 1^9]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{41}^{+*}$	$16T_{1828}^{+*}$	36864	$[16, 8, 4^2, 3^2, 2, 1^9]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{41}^{+*}$	$16T_{1829}^{+*}$	36864	$[16, 8, 4^2, 3^2, 2, 1^9]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{41}^{+*}$	$16T_{1864}^{+*}$	73728	$[16, 8, 4^2, 3^2, 2^2, 1^8]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{42}^{+*}$	$16T_{1856}^{+*}$	55296	$[16, 4^3, 3^3, 2, 1^8]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{42}^{+*}$	$16T_{1858}^{+*}$	55296	$[16, 4^3, 3^3, 2, 1^8]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{42}^{+*}$	$16T_{1897}^{+*}$	165888	$[16, 4^3, 3^4, 2, 1^7]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{45}^{+*}$	$16T_{1833}^{+*}$	36864	$[16, 8, 4^2, 3^2, 2, 1^9]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{45}^{+*}$	$16T_{1880}^{+*}$	110592	$[16, 8, 4^2, 3^3, 2, 1^8]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{45}^{+*}$	$16T_{1909}^{+*}$	331776	$[16, 8, 4^2, 3^4, 2, 1^7]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{45}^{+*}$	$16T_{1910}^{+*}$	331776	$[16, 8, 4^2, 3^4, 2, 1^7]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{45}^{+*}$	$16T_{1913}^{+*}$	331776	$[16, 8, 4^2, 3^4, 2, 1^7]$
$[8, 4, 3, 1]$	$1T_1, 3T_2^*, 4T_5^*, 8T_{45}^{+*}$	$16T_{1915}^{+*}$	331776	$[16, 8, 4^2, 3^4, 2, 1^7]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[8, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 8T_{45}^{+*}$	$16T_{1923}^{+*}$	663552	$[16, 8, 4^2, 3^4, 2^2, 1^6]$
[8, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 8T_{45}^{+*}$	$16T_{1924}^{+*}$	663552	$[16, 4^3, 3^4, 2^3, 1^5]$
[8, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 8T_{46}^*$	$16T_{1922}^{+*}$	663552	$[16, 8, 4^2, 3^4, 2^2, 1^6]$
[8, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 8T_{46}^*$	$16T_{1928}^{+*}$	663552	$[16, 4^3, 3^4, 2^3, 1^5]$
[8, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 8T_{47}^*$	$16T_{1931}^{+*}$	1327104	$[16, 8, 4^2, 3^4, 2^3, 1^5]$
[8, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 8T_{47}^*$	$16T_{1933}^{+*}$	1327104	$[16, 8, 4^2, 3^4, 2^3, 1^5]$
[8, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 8T_{47}^*$	$16T_{1934}^{+*}$	1327104	$[16, 8, 4^2, 3^4, 2^3, 1^5]$
[8, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 8T_{47}^*$	$16T_{1935}^{+*}$	1327104	$[16, 8, 4^2, 3^4, 2^3, 1^5]$
[8, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 8T_{47}^*$	$16T_{1939}^{+*}$	2654208	$[16, 8, 4^2, 3^4, 2^4, 1^4]$
$[6^2, 3, 1]$	$1T_1, 3T_1^{+*}, (6T_1^*)^2$	$16T_{183}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[6^2, 3, 1]$	$1T_1, 3T_1^{+*}, (6T_1^*)^2$	$16T_{184}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[6^2, 3, 1]$	$1T_1, 3T_1^{+*}, (6T_1^*)^2$	$16T_{185}^{+*}$	96	$[16, 3, 2, 1^{13}]$
$[6^2, 3, 1]$	$1T_1, 3T_2^*, (6T_3^*)^2$	$16T_{431}^{+*}$	192	$[16, 3, 2^2, 1^{12}]$
$[6^2, 3, 1]$	$1T_1, 3T_2^*, (6T_3^*)^2$	$16T_{436}^{+*}$	192	$[16, 3, 2^2, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_2^{+*}$	$16T_{419}^{+*}$	192	$[16, 4, 3, 1^{13}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_2^{+*}$	$16T_{420}^{+*}$	192	$[16, 4, 3, 1^{13}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_4^{+*}$	$16T_{440}^{+*}$	192	$[16, 4, 3, 1^{13}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_6^{+*}$	$16T_{731}^{+*}$	384	$[16, 4, 3, 2, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_6^{+*}$	$16T_{769}^{+*}$	384	$[16, 4, 3, 2, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{20}^{+*}$	$16T_{1029}^{+*}$	576	$[16, 12, 3, 1^{13}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{26}^{+*}$	$16T_{1042}^{+*}$	768	$[16, 4^2, 3, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{26}^{+*}$	$16T_{1059}^{+*}$	768	$[16, 4^2, 3, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{85}^{+*}$	$16T_{1492}^{+*}$	2304	$[16, 12, 4, 3, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{90}^{+*}$	$16T_{1545}^{+*}$	3072	$[16, 4^3, 3, 1^{11}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{128}^{+*}$	$16T_{1649}^{+*}$	4608	$[16, 12, 8, 3, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{164}^{+*}$	$16T_{1749}^{+*}$	9216	$[16, 12, 4^2, 3, 1^{11}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{206}^{+*}$	$16T_{1789}^{+*}$	18432	$[16, 12, 8, 4, 3, 1^{11}]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{265}^{+*}$	$16T_{1876}^{+*}$	82944	$[16, 12, 4^2, 3^3, 1^9]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{265}^{+*}$	$16T_{1877}^{+*}$	82944	$[16, 12, 4^2, 3^3, 1^9]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{265}^{+*}$	$16T_{1904}^{+*}$	248832	$[16, 12, 4^2, 3^4, 1^8]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{275}^{+*}$	$16T_{1901}^{+*}$	165888	$[16, 12, 8, 4, 3^3, 1^9]$
[12, 3, 1]	$1T_1, 3T_1^{+*}, 12T_{275}^{+*}$	$16T_{1918}^{+*}$	497664	$[16, 12, 8, 4, 3^4, 1^8]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_5^*$	$16T_{430}^{+*}$	192	$[16, 3, 2^2, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_5^*$	$16T_{433}^{+*}$	192	$[16, 3, 2^2, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_8^*$	$16T_{776}^{+*}$	384	$[16, 4, 3, 2, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{13}^*$	$16T_{745}^{+*}$	384	$[16, 4, 3, 2, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{13}^*$	$16T_{746}^{+*}$	384	$[16, 4, 3, 2, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{22}^*$	$16T_{1063}^{+*}$	768	$[16, 4, 3, 2^2, 1^{11}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{22}^*$	$16T_{1073}^{+*}$	768	$[16, 4, 3, 2^2, 1^{11}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{27}^*$	$16T_{1070}^{+*}$	768	$[16, 4, 3, 2^2, 1^{11}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{27}^*$	$16T_{1074}^{+*}$	768	$[16, 4, 3, 2^2, 1^{11}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{44}^*$	$16T_{1297}^{+*}$	1152	$[16, 12, 3, 2, 1^{12}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{49}^*$	$16T_{1314}^{+*}$	1536	$[16, 4^2, 3, 2, 1^{11}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{49}^*$	$16T_{1317}^{+*}$	1536	$[16, 4^2, 3, 2, 1^{11}]$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{127}^*$	$16T_{1652}^{+*}$	4608	$[16, 12, 4, 3, 2, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{129}^*$	$16T_{1650}^{+*}$	4608	[16, 12, 4, 3, 2, 1 <sup>11</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{148}^*$	$16T_{1690}^{+*}$	6144	[16, 4 <sup>3</sup> , 3, 2, 1 <sup>10</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{165}^*$	$16T_{1750}^{+*}$	9216	[16, 12, 8, 3, 2, 1 <sup>11</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{204}^*$	$16T_{1797}^{+*}$	18432	[16, 12, 4 <sup>2</sup> , 3, 2, 1 <sup>10</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{205}^*$	$16T_{1790}^{+*}$	18432	[16, 12, 4 <sup>2</sup> , 3, 2, 1 <sup>10</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{239}^*$	$16T_{1834}^{+*}$	36864	[16, 12, 8, 4, 3, 2, 1 <sup>10</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{253}^*$	$16T_{1859}^{+*}$	55296	[16, 12, 4 <sup>2</sup> , 3 <sup>2</sup> , 2, 1 <sup>9</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{268}^*$	$16T_{1881}^*$	110592	[16, 12, 4 <sup>2</sup> , 3 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>8</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{273}^*$	$16T_{1895}^{+*}$	165888	[16, 12, 4 <sup>2</sup> , 3 <sup>3</sup> , 2, 1 <sup>8</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{273}^*$	$16T_{1917}^{+*}$	497664	[16, 12, 4 <sup>2</sup> , 3 <sup>4</sup> , 2, 1 <sup>7</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{273}^*$	$16T_{1919}^{+*}$	497664	[16, 12, 4 <sup>2</sup> , 3 <sup>4</sup> , 2, 1 <sup>7</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{276}^*$	$16T_{1899}^{+*}$	165888	[16, 12, 4 <sup>2</sup> , 3 <sup>3</sup> , 2, 1 <sup>8</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{276}^*$	$16T_{1900}^{+*}$	165888	[16, 12, 4 <sup>2</sup> , 3 <sup>3</sup> , 2, 1 <sup>8</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{276}^*$	$16T_{1920}^{+*}$	497664	[16, 12, 4 <sup>2</sup> , 3 <sup>4</sup> , 2, 1 <sup>7</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{283}^*$	$16T_{1914}^{+*}$	331776	[16, 12, 8, 4, 3 <sup>3</sup> , 2, 1 <sup>8</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{283}^*$	$16T_{1929}^{+*}$	995328	[16, 12, 8, 4, 3 <sup>4</sup> , 2, 1 <sup>7</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{283}^*$	$16T_{1930}^{+*}$	995328	[16, 12, 4 <sup>2</sup> , 3 <sup>4</sup> , 2 <sup>2</sup> , 1 <sup>6</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{292}^*$	$16T_{1937}^{+*}$	1990656	[16, 12, 4 <sup>2</sup> , 3 <sup>4</sup> , 2 <sup>3</sup> , 1 <sup>5</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{292}^*$	$16T_{1941}^{+*}$	3981312	[16, 12, 4 <sup>2</sup> , 3 <sup>4</sup> , 2 <sup>4</sup> , 1 <sup>4</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{294}^*$	$16T_{1942}^{+*}$	3981312	[16, 12, 8, 4, 3 <sup>4</sup> , 2 <sup>3</sup> , 1 <sup>5</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{294}^*$	$16T_{1943}^{+*}$	3981312	[16, 12, 8, 4, 3 <sup>4</sup> , 2 <sup>3</sup> , 1 <sup>5</sup> ]
[12, 3, 1]	$1T_1, 3T_2^*, 12T_{294}^*$	$16T_{1947}^{+*}$	7962624	[16, 12, 8, 4, 3 <sup>4</sup> , 2 <sup>4</sup> , 1 <sup>4</sup> ]
[5 <sup>3</sup> , 1]	$1T_1, (5T_1^{+*})^3$	$16T_{178}^{+*}$	80	[16, 5, 1 <sup>14</sup> ]
[5 <sup>3</sup> , 1]	$1T_1, (5T_2^{+*})^3$	$16T_{415}^{+*}$	160	[16, 5, 2, 1 <sup>13</sup> ]
[10, 5, 1]	$1T_1, 5T_3^*, 10T_4^+$	$16T_{711}^{+*}$	320	[16, 10, 2, 1 <sup>13</sup> ]
[10, 5, 1]	$1T_1, 5T_4^+, 10T_7^+$	$16T_{1081}^+$	960	[16, 6, 5, 2, 1 <sup>12</sup> ]
[10, 5, 1]	$1T_1, 5T_5, 10T_{13}$	$16T_{1328}^+$	1920	[16, 6, 5, 2 <sup>2</sup> , 1 <sup>11</sup> ]
[9, 6, 1]	$1T_1, 6T_5^*, 9T_4^*$	$16T_{708}^{+*}$	288	[16, 9, 2, 1 <sup>13</sup> ]
[9, 6, 1]	$1T_1, 6T_9^*, 9T_8^*$	$16T_{1034}^{+*}$	576	[16, 9, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[9, 6, 1]	$1T_1, 6T_{10}^{+*}, 9T_9^{+*}$	$16T_{1030}^{+*}$	576	[16, 9, 4, 1 <sup>13</sup> ]
[9, 6, 1]	$1T_1, 6T_{13}^*, 9T_{16}^*$	$16T_{1294}^{+*}$	1152	[16, 9, 4, 2, 1 <sup>12</sup> ]
[8, 7, 1]	$1T_1, 7T_1^{+*}, 8T_{25}^{+*}$	$16T_{1075}^{+*}$	896	[16, 8, 7, 1 <sup>13</sup> ]
[8, 7, 1]	$1T_1, 7T_1^{+*}, 8T_{25}^{+*}$	$16T_{1078}^{+*}$	896	[16, 8, 7, 1 <sup>13</sup> ]
[8, 7, 1]	$1T_1, 7T_1^{+*}, 8T_{25}^{+*}$	$16T_{1693}^{+*}$	6272	[16, 8, 7 <sup>2</sup> , 1 <sup>12</sup> ]
[8, 7, 1]	$1T_1, 7T_3^{+*}, 8T_{36}^{+*}$	$16T_{1501}^{+*}$	2688	[16, 8, 7, 3, 1 <sup>12</sup> ]
[8, 7, 1]	$1T_1, 7T_3^{+*}, 8T_{36}^{+*}$	$16T_{1502}^{+*}$	2688	[16, 8, 7, 3, 1 <sup>12</sup> ]
[8, 7, 1]	$1T_1, 7T_3^{+*}, 8T_{36}^{+*}$	$16T_{1798}^{+*}$	18816	[16, 8, 7 <sup>2</sup> , 3, 1 <sup>11</sup> ]
[8, 7, 1]	$1T_1, 7T_3^{+*}, 8T_{36}^{+*}$	$16T_{1799}^{+*}$	18816	[16, 8, 7 <sup>2</sup> , 3, 1 <sup>11</sup> ]
[8, 7, 1]	$1T_1, 7T_3^{+*}, 8T_{36}^{+*}$	$16T_{1860}^{+*}$	56448	[16, 8, 7 <sup>2</sup> , 3 <sup>2</sup> , 1 <sup>10</sup> ]
[8, 7, 1]	$1T_1, 7T_3^{+*}, 8T_{37}^+$	$16T_{1861}^+$	56448	[16, 8, 7 <sup>2</sup> , 3 <sup>2</sup> , 1 <sup>10</sup> ]
[8, 7, 1]	$1T_1, 7T_4^*, 8T_{43}$	$16T_{1882}$	112896	[16, 8, 7 <sup>2</sup> , 6, 3, 1 <sup>10</sup> ]
[8, 7, 1]	$1T_1, 7T_4^*, 8T_{43}$	$16T_{1883}^+$	112896	[16, 8, 7 <sup>2</sup> , 6, 3, 1 <sup>10</sup> ]
[8, 7, 1]	$1T_1, 7T_4^*, 8T_{43}$	$16T_{1903}^+$	225792	[16, 8, 7 <sup>2</sup> , 6 <sup>2</sup> , 1 <sup>10</sup> ]
[8, 7, 1]	$1T_1, 7T_5^+, 8T_{37}^+$	$16T_{1505}^+$	2688	[16, 7, 6, 4, 1 <sup>12</sup> ]
[8, 7, 1]	$1T_1, 7T_5^+, 8T_{48}^+$	$16T_{1801}^+$	21504	[16, 8, 7, 6, 4, 1 <sup>11</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 16

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[8, 7, 1]	$1T_1, 7T_5^+, 8T_{48}^+$	$16T_{1802}^+$	21504	[16, 8, 7, 6, 4, 1 <sup>11</sup> ]
[8, 7, 1]	$1T_1, 7T_5^+, 8T_{48}^+$	$16T_{1940}^+$	3612672	[16, 8, 7 <sup>2</sup> , 6 <sup>2</sup> , 4 <sup>2</sup> , 1 <sup>8</sup> ]
[8, 7, 1]	$1T_1, 7T_6^+, 8T_{49}^+$	$16T_{1949}^+$	812851200	[16, 8, 7 <sup>2</sup> , 6 <sup>2</sup> , 5 <sup>2</sup> , 4 <sup>2</sup> , 3 <sup>2</sup> , 1 <sup>4</sup> ]
[8, 7, 1]	$1T_1, 7T_7, 8T_{50}$	$16T_{1950}$	1625702400	[16, 8, 7 <sup>2</sup> , 6 <sup>2</sup> , 5 <sup>2</sup> , 4 <sup>2</sup> , 3 <sup>2</sup> , 2, 1 <sup>3</sup> ]
[8, 7, 1]	$1T_1, 7T_7, 8T_{50}$	$16T_{1951}^+$	1625702400	[16, 8, 7 <sup>2</sup> , 6 <sup>2</sup> , 5 <sup>2</sup> , 4 <sup>2</sup> , 3 <sup>2</sup> , 2, 1 <sup>3</sup> ]
[8, 7, 1]	$1T_1, 7T_7, 8T_{50}$	$16T_{1952}$	3251404800	[16, 8, 7 <sup>2</sup> , 6 <sup>2</sup> , 5 <sup>2</sup> , 4 <sup>2</sup> , 3 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>2</sup> ]
[15, 1]	$1T_1, 15T_1^{+*}$	$16T_{447}^{+*}$	240	[16, 15, 1 <sup>14</sup> ]
[15, 1]	$1T_1, 15T_3^{+*}$	$16T_{777}^{+*}$	480	[16, 15, 2, 1 <sup>13</sup> ]
[15, 1]	$1T_1, 15T_5^+$	$16T_{1080}^+$	960	[16, 15, 4, 1 <sup>13</sup> ]
[15, 1]	$1T_1, 15T_6^{+*}$	$16T_{1079}^{+*}$	960	[16, 15, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[15, 1]	$1T_1, 15T_{10}^+$	$16T_{1329}^+$	1920	[16, 15, 4, 2, 1 <sup>12</sup> ]
[15, 1]	$1T_1, 15T_{15}^+$	$16T_{1508}^+$	2880	[16, 15, 12, 1 <sup>13</sup> ]
[15, 1]	$1T_1, 15T_{20}^+$	$16T_{1654}^+$	5760	[16, 15, 6, 4, 1 <sup>12</sup> ]
[15, 1]	$1T_1, 15T_{21}^+$	$16T_{1653}^+$	5760	[16, 15, 12, 2, 1 <sup>12</sup> ]
[15, 1]	$1T_1, 15T_{28}^+$	$16T_{1753}^+$	11520	[16, 15, 6, 4, 2, 1 <sup>11</sup> ]
[15, 1]	$1T_1, 15T_{47}^+$	$16T_{1840}^+$	40320	[16, 15, 14, 12, 1 <sup>12</sup> ]
[15, 1]	$1T_1, 15T_{72}^+$	$16T_{1906}^+$	322560	[16, 15, 14, 12, 8, 1 <sup>11</sup> ]
[15, 1]	$1T_1, 15T_{103}^+$	$16T_{1953}^+$	$16! / 2$	[16, ..., 3, 1 <sup>2</sup> ]
[15, 1]	$1T_1, 15T_{104}$	$16T_{1954}$	$16!$	[16, ..., 1]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

Splitting table of degree 17

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{17}]$	$(1T_1)^{17}$	$17T_1^{+*}$	17	$[17, 1^{16}]$
$[2^8, 1]$	$1T_1, (2T_1)^8$	$17T_2^{+*}$	34	$[17, 2, 1^{15}]$
$[4^4, 1]$	$1T_1, (4T_1^*)^4$	$17T_3^{+*}$	68	$[17, 4, 1^{15}]$
$[8^2, 1]$	$1T_1, (8T_1^*)^2$	$17T_4^{+*}$	136	$[17, 8, 1^{15}]$
$[16, 1]$	$1T_1, 16T_1^*$	$17T_5^*$	272	$[17, 16, 1^{15}]$
$[16, 1]$	$1T_1, 16T_{447}^{+*}$	$17T_6^+$	4080	$[17, 16, 15, 1^{14}]$
$[16, 1]$	$1T_1, 16T_{777}^{+*}$	$17T_7^+$	8160	$[17, 16, 15, 2, 1^{13}]$
$[16, 1]$	$1T_1, 16T_{1079}^{+*}$	$17T_8^+$	16320	$[17, 16, 15, 4, 1^{13}]$
$[16, 1]$	$1T_1, 16T_{1953}^+$	$17T_9^+$	$17! / 2$	$[17, \dots, 3, 1^2]$
$[16, 1]$	$1T_1, 16T_{1954}$	$17T_{10}$	$17!$	$[17, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{18}]$	$(1T_1)^{18}$	$18T_1^*$	18	$[18, 1^{17}]$
$[1^{18}]$	$(1T_1)^{18}$	$18T_2^*$	18	$[18, 1^{17}]$
$[1^{18}]$	$(1T_1)^{18}$	$18T_3^*$	18	$[18, 1^{17}]$
$[1^{18}]$	$(1T_1)^{18}$	$18T_4^*$	18	$[18, 1^{17}]$
$[1^{18}]$	$(1T_1)^{18}$	$18T_5^*$	18	$[18, 1^{17}]$
$[3^3, 1^9]$	$(1T_1)^9, (3T_1^{+*})^3$	$18T_{16}^*$	54	$[18, 3, 1^{16}]$
$[3^3, 1^9]$	$(1T_1)^9, (3T_1^{+*})^3$	$18T_{17}^*$	54	$[18, 3, 1^{16}]$
$[3^3, 1^9]$	$(1T_1)^9, (3T_1^{+*})^3$	$18T_{19}^*$	54	$[18, 3, 1^{16}]$
$[3^3, 1^9]$	$(1T_1)^9, (3T_1^{+*})^3$	$18T_{23}^*$	54	$[18, 3, 1^{16}]$
$[9, 1^9]$	$(1T_1)^9, 9T_1^{+*}$	$18T_{74}^*$	162	$[18, 9, 1^{16}]$
$[9, 1^9]$	$(1T_1)^9, 9T_2^{+*}$	$18T_{79}^*$	162	$[18, 9, 1^{16}]$
$[2^6, 1^6]$	$(1T_1)^6, (2T_1)^6$	$18T_6^*$	36	$[18, 2, 1^{16}]$
$[2^6, 1^6]$	$(1T_1)^6, (2T_1)^6$	$18T_7^{+*}$	36	$[18, 2, 1^{16}]$
$[2^6, 1^6]$	$(1T_1)^6, (2T_1)^6$	$18T_8^{+*}$	36	$[18, 2, 1^{16}]$
$[2^6, 1^6]$	$(1T_1)^6, (2T_1)^6$	$18T_{11}^*$	36	$[18, 2, 1^{16}]$
$[2^6, 1^6]$	$(1T_1)^6, (2T_1)^6$	$18T_{25}^*$	72	$[18, 2^2, 1^{15}]$
$[2^6, 1^6]$	$(1T_1)^6, (2T_1)^6$	$18T_{26}^*$	72	$[18, 2^2, 1^{15}]$
$[3^4, 1^6]$	$(1T_1)^6, (3T_1^{+*})^4$	$18T_{14}^*$	54	$[18, 3, 1^{16}]$
$[3^4, 1^6]$	$(1T_1)^6, (3T_1^{+*})^4$	$18T_{15}^*$	54	$[18, 3, 1^{16}]$
$[3^4, 1^6]$	$(1T_1)^6, (3T_1^{+*})^4$	$18T_{18}^*$	54	$[18, 3, 1^{16}]$
$[3^4, 1^6]$	$(1T_1)^6, (3T_1^{+*})^4$	$18T_{20}^*$	54	$[18, 3, 1^{16}]$
$[3^4, 1^6]$	$(1T_1)^6, (3T_1^{+*})^4$	$18T_{21}^*$	54	$[18, 3, 1^{16}]$
$[3^4, 1^6]$	$(1T_1)^6, (3T_1^{+*})^4$	$18T_{24}^*$	54	$[18, 3, 1^{16}]$
$[3^4, 1^6]$	$(1T_1)^6, (3T_1^{+*})^4$	$18T_{75}^*$	162	$[18, 3^2, 1^{15}]$
$[3^4, 1^6]$	$(1T_1)^6, (3T_1^{+*})^4$	$18T_{85}^*$	162	$[18, 3^2, 1^{15}]$
$[3^4, 1^6]$	$(1T_1)^6, (3T_1^{+*})^4$	$18T_{86}^*$	162	$[18, 3^2, 1^{15}]$
$[3^4, 1^6]$	$(1T_1)^6, (3T_1^{+*})^4$	$18T_{88}^*$	162	$[18, 3^2, 1^{15}]$
$[4^3, 1^6]$	$(1T_1)^6, (4T_1^*)^3$	$18T_{30}^*$	72	$[18, 4, 1^{16}]$
$[4^3, 1^6]$	$(1T_1)^6, (4T_2^{+*})^3$	$18T_{33}^{+*}$	72	$[18, 4, 1^{16}]$
$[4^3, 1^6]$	$(1T_1)^6, (4T_3^*)^3$	$18T_{61}^*$	144	$[18, 4, 2, 1^{15}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_1^*)^2$	$18T_{47}^{+*}$	108	$[18, 6, 1^{16}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_1^*)^2$	$18T_{48}^{+*}$	108	$[18, 6, 1^{16}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_1^*)^2$	$18T_{91}^*$	216	$[18, 6, 2, 1^{15}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_1^*)^2$	$18T_{92}^*$	216	$[18, 6, 2, 1^{15}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_1^*)^2$	$18T_{127}^{+*}$	324	$[18, 6, 3, 1^{15}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_1^*)^2$	$18T_{188}^*$	648	$[18, 6^2, 1^{15}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_2^*)^2$	$18T_{52}^*$	108	$[18, 6, 1^{16}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_2^*)^2$	$18T_{57}^*$	108	$[18, 6, 1^{16}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_2^*)^2$	$18T_{143}^{+*}$	324	$[18, 6, 3, 1^{15}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_2^*)^2$	$18T_{207}^*$	648	$[18, 6^2, 1^{15}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_5^*)^2$	$18T_{119}^*$	324	$[18, 6, 3, 1^{15}]$
$[6^2, 1^6]$	$(1T_1)^6, (6T_5^*)^2$	$18T_{137}^*$	324	$[18, 6, 3, 1^{15}]$
$[12, 1^6]$	$(1T_1)^6, 12T_3^{+*}$	$18T_{108}^{+*}$	216	$[18, 12, 1^{16}]$
$[12, 1^6]$	$(1T_1)^6, 12T_5^*$	$18T_{107}^*$	216	$[18, 12, 1^{16}]$
$[12, 1^6]$	$(1T_1)^6, 12T_{15}^*$	$18T_{156}^*$	432	$[18, 12, 2, 1^{15}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

⇒

## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[12, 1^6]$	$(1T_1)^6, 12T_{16}^{+*}$	$18T_{224}^{+*}$	648	$[18, 12, 3, 1^{15}]$
$[12, 1^6]$	$(1T_1)^6, 12T_{17}^*$	$18T_{221}^*$	648	$[18, 12, 3, 1^{15}]$
$[12, 1^6]$	$(1T_1)^6, 12T_{18}^{+*}$	$18T_{203}^{+*}$	648	$[18, 12, 3, 1^{15}]$
$[12, 1^6]$	$(1T_1)^6, 12T_{19}^*$	$18T_{208}^*$	648	$[18, 12, 3, 1^{15}]$
$[12, 1^6]$	$(1T_1)^6, 12T_{35}^*$	$18T_{314}^*$	1296	$[18, 12, 6, 1^{15}]$
$[12, 1^6]$	$(1T_1)^6, 12T_{42}^*$	$18T_{284}^*$	1296	$[18, 12, 6, 1^{15}]$
$[3^3, 2^3, 1^3]$	$(1T_1)^3, (2T_1)^3, (3T_2^*)^3$	$18T_{43}^*$	108	$[18, 3, 2, 1^{15}]$
$[3^3, 2^3, 1^3]$	$(1T_1)^3, (2T_1)^3, (3T_2^*)^3$	$18T_{44}^{+*}$	108	$[18, 3, 2, 1^{15}]$
$[3^3, 2^3, 1^3]$	$(1T_1)^3, (2T_1)^3, (3T_2^*)^3$	$18T_{53}^*$	108	$[18, 3, 2, 1^{15}]$
$[3^3, 2^3, 1^3]$	$(1T_1)^3, (2T_1)^3, (3T_2^*)^3$	$18T_{54}^{+*}$	108	$[18, 3, 2, 1^{15}]$
$[3^3, 2^3, 1^3]$	$(1T_1)^3, (2T_1)^3, (3T_2^*)^3$	$18T_{93}^*$	216	$[18, 3, 2^2, 1^{14}]$
$[3^3, 2^3, 1^3]$	$(1T_1)^3, (2T_1)^3, (3T_2^*)^3$	$18T_{103}^*$	216	$[18, 3, 2^2, 1^{14}]$
$[6, 3, 2^3, 1^3]$	$(1T_1)^3, (2T_1)^3, 3T_1^{+*}, 6T_1^*$	$18T_{46}^*$	108	$[18, 3, 2, 1^{15}]$
$[9, 2^3, 1^3]$	$(1T_1)^3, (2T_1)^3, 9T_4^*$	$18T_{120}^*$	324	$[18, 9, 2, 1^{15}]$
$[9, 2^3, 1^3]$	$(1T_1)^3, (2T_1)^3, 9T_4^*$	$18T_{123}^{+*}$	324	$[18, 9, 2, 1^{15}]$
$[9, 2^3, 1^3]$	$(1T_1)^3, (2T_1)^3, 9T_4^*$	$18T_{189}^*$	648	$[18, 9, 2^2, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{22}^*$	54	$[18, 3, 1^{16}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{76}^*$	162	$[18, 3^2, 1^{15}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{77}^*$	162	$[18, 3^2, 1^{15}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{78}^*$	162	$[18, 3^2, 1^{15}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{82}^*$	162	$[18, 3^2, 1^{15}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{83}^*$	162	$[18, 3^2, 1^{15}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{84}^*$	162	$[18, 3^2, 1^{15}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{87}^*$	162	$[18, 3^2, 1^{15}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{89}^*$	162	$[18, 3^2, 1^{15}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{159}^*$	486	$[18, 3^3, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{160}^*$	486	$[18, 3^3, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{162}^*$	486	$[18, 3^3, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{163}^*$	486	$[18, 3^3, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{164}^*$	486	$[18, 3^3, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{165}^*$	486	$[18, 3^3, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{167}^*$	486	$[18, 3^3, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{169}^*$	486	$[18, 3^3, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{171}^*$	486	$[18, 3^3, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{172}^*$	486	$[18, 3^3, 1^{14}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{323}^*$	1458	$[18, 3^4, 1^{13}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{325}^*$	1458	$[18, 3^4, 1^{13}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{327}^*$	1458	$[18, 3^4, 1^{13}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{329}^*$	1458	$[18, 3^4, 1^{13}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{332}^*$	1458	$[18, 3^4, 1^{13}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{333}^*$	1458	$[18, 3^4, 1^{13}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{453}^*$	4374	$[18, 3^5, 1^{12}]$
$[3^5, 1^3]$	$(1T_1)^3, (3T_1^{+*})^5$	$18T_{458}^*$	4374	$[18, 3^5, 1^{12}]$
$[6, 3^3, 1^3]$	$(1T_1)^3, (3T_2^*)^3, 6T_2^*$	$18T_{49}^{+*}$	108	$[18, 3, 2, 1^{15}]$
$[6, 3^3, 1^3]$	$(1T_1)^3, (3T_2^*)^3, 6T_2^*$	$18T_{56}^*$	108	$[18, 3, 2, 1^{15}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_1^{+*}$	$18T_{80}^*$	162	$[18, 3^2, 1^{15}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_2^{+*}$	$18T_{81}^*$	162	$[18, 3^2, 1^{15}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_6^{+*}$	$18T_{158}^*$	486	$[18, 9, 3, 1^{15}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_6^{+*}$	$18T_{166}^*$	486	$[18, 9, 3, 1^{15}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_6^{+*}$	$18T_{173}^*$	486	$[18, 3^3, 1^{14}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_6^{+*}$	$18T_{174}^*$	486	$[18, 3^3, 1^{14}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_6^{+*}$	$18T_{324}^*$	1458	$[18, 9, 3^2, 1^{14}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_6^{+*}$	$18T_{330}^*$	1458	$[18, 3^4, 1^{13}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_6^{+*}$	$18T_{331}^*$	1458	$[18, 3^4, 1^{13}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_7^{+*}$	$18T_{161}^*$	486	$[18, 9, 3, 1^{15}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_7^{+*}$	$18T_{168}^*$	486	$[18, 9, 3, 1^{15}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_7^{+*}$	$18T_{170}^*$	486	$[18, 3^3, 1^{14}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_7^{+*}$	$18T_{326}^*$	1458	$[18, 3^4, 1^{13}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_7^{+*}$	$18T_{328}^*$	1458	$[18, 9, 3^2, 1^{14}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_7^{+*}$	$18T_{454}^*$	4374	$[18, 9, 3^3, 1^{13}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_7^{+*}$	$18T_{455}^*$	4374	$[18, 9, 3^3, 1^{13}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_7^{+*}$	$18T_{456}^*$	4374	$[18, 9, 3^3, 1^{13}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_7^{+*}$	$18T_{457}^*$	4374	$[18, 9, 3^3, 1^{13}]$
$[9, 3^2, 1^3]$	$(1T_1)^3, (3T_1^{+*})^2, 9T_7^{+*}$	$18T_{584}^*$	13122	$[18, 9, 3^4, 1^{12}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 6T_2^*, 6T_5^*$	$18T_{126}^*$	324	$[18, 6, 3, 1^{15}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 6T_2^*, 6T_5^*$	$18T_{135}^*$	324	$[18, 6, 3, 1^{15}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 6T_2^*, 6T_5^*$	$18T_{250}^*$	972	$[18, 6, 3^2, 1^{14}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{237}^*$	972	$[18, 6, 3^2, 1^{14}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{241}^*$	972	$[18, 6, 3^2, 1^{14}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{242}^*$	972	$[18, 6, 3^2, 1^{14}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{243}^{+*}$	972	$[18, 6, 3^2, 1^{14}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{336}^*$	1944	$[18, 6^2, 3, 1^{14}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{337}^*$	1944	$[18, 6^2, 3, 1^{14}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{406}^*$	2916	$[18, 6, 3^3, 1^{13}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{418}^{+*}$	2916	$[18, 6, 3^3, 1^{13}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{419}^{+*}$	2916	$[18, 6, 3^3, 1^{13}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{424}^*$	2916	$[18, 6, 3^3, 1^{13}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{489}^*$	5832	$[18, 6^2, 3^2, 1^{13}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{490}^*$	5832	$[18, 6^2, 3^2, 1^{13}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{529}^*$	8748	$[18, 6, 3^4, 1^{12}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{535}^{+*}$	8748	$[18, 6, 3^4, 1^{12}]$
$[6^2, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, (6T_5^*)^2$	$18T_{598}^*$	17496	$[18, 6^2, 3^3, 1^{12}]$
$[12, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 12T_{70}^{+*}$	$18T_{349}^{+*}$	1944	$[18, 12, 3^2, 1^{14}]$
$[12, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 12T_{73}^*$	$18T_{346}^*$	1944	$[18, 12, 3^2, 1^{14}]$
$[12, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 12T_{121}^*$	$18T_{438}^*$	3888	$[18, 12, 6, 3, 1^{14}]$
$[12, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 12T_{130}^{+*}$	$18T_{510}^{+*}$	5832	$[18, 12, 3^3, 1^{13}]$
$[12, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 12T_{130}^{+*}$	$18T_{610}^{+*}$	17496	$[18, 12, 3^4, 1^{12}]$
$[12, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 12T_{131}^*$	$18T_{511}^*$	5832	$[18, 12, 3^3, 1^{13}]$
$[12, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 12T_{131}^*$	$18T_{605}^*$	17496	$[18, 12, 3^4, 1^{12}]$
$[12, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 12T_{167}^*$	$18T_{583}^*$	11664	$[18, 12, 6, 3^2, 1^{13}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[12, 3, 1^3]$	$(1T_1)^3, 3T_1^{+*}, 12T_{167}^*$	$18T_{672}^*$	34992	$[18, 12, 6, 3^3, 1^{12}]$
$[5^3, 1^3]$	$(1T_1)^3, (5T_2^{+*})^3$	$18T_{90}^+$	180	$[18, 5, 2, 1^{15}]$
$[5^3, 1^3]$	$(1T_1)^3, (5T_3^*)^3$	$18T_{144}^+$	360	$[18, 5, 4, 1^{15}]$
$[5^3, 1^3]$	$(1T_1)^3, (5T_4^+)^3$	$18T_{261}^+$	1080	$[18, 5, 4, 3, 1^{14}]$
$[5^3, 1^3]$	$(1T_1)^3, (5T_5^*)^3$	$18T_{362}^+$	2160	$[18, 5, 4, 3, 2, 1^{13}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_2^*, 9T_4^*$	$18T_{118}^*$	324	$[18, 6, 3, 1^{15}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_2^*, 9T_4^*$	$18T_{131}^{+*}$	324	$[18, 6, 3, 1^{15}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_2^*, 9T_{12}^*$	$18T_{244}^*$	972	$[18, 9, 6, 1^{15}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_2^*, 9T_{12}^*$	$18T_{421}^{+*}$	2916	$[18, 9, 6, 3, 1^{14}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_2^*, 9T_{12}^*$	$18T_{425}^*$	2916	$[18, 9, 6, 3, 1^{14}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_2^*, 9T_{12}^*$	$18T_{506}^*$	5832	$[18, 9, 6^2, 1^{14}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_5^*, 9T_{20}^*$	$18T_{531}^*$	8748	$[18, 9, 6, 3^2, 1^{13}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_5^*, 9T_{20}^*$	$18T_{533}^{+*}$	8748	$[18, 9, 6, 3^2, 1^{13}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_5^*, 9T_{20}^*$	$18T_{537}^{+*}$	8748	$[18, 9, 6, 3^2, 1^{13}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_5^*, 9T_{20}^*$	$18T_{541}^*$	8748	$[18, 9, 6, 3^2, 1^{13}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_5^*, 9T_{20}^*$	$18T_{600}^*$	17496	$[18, 9, 6^2, 3, 1^{13}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_5^*, 9T_{20}^*$	$18T_{614}^*$	17496	$[18, 9, 6^2, 3, 1^{13}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_5^*, 9T_{20}^*$	$18T_{652}^{+*}$	26244	$[18, 9, 6, 3^3, 1^{12}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_5^*, 9T_{20}^*$	$18T_{653}^*$	26244	$[18, 9, 6, 3^3, 1^{12}]$
$[9, 6, 1^3]$	$(1T_1)^3, 6T_5^*, 9T_{20}^*$	$18T_{724}^*$	52488	$[18, 9, 6^2, 3^2, 1^{12}]$
$[15, 1^3]$	$(1T_1)^3, 15T_5^+$	$18T_{262}^+$	1080	$[18, 15, 4, 1^{15}]$
$[15, 1^3]$	$(1T_1)^3, 15T_{34}^{+*}$	$18T_{596}^+$	14580	$[18, 15, 6, 3^2, 1^{13}]$
$[15, 1^3]$	$(1T_1)^3, 15T_{41}^*$	$18T_{666}^+$	29160	$[18, 15, 12, 3^2, 1^{13}]$
$[15, 1^3]$	$(1T_1)^3, 15T_{46}^{+*}$	$18T_{722}^+$	43740	$[18, 15, 6, 3^3, 1^{12}]$
$[15, 1^3]$	$(1T_1)^3, 15T_{53}^+$	$18T_{791}^+$	87480	$[18, 15, 12, 9, 3, 1^{13}]$
$[15, 1^3]$	$(1T_1)^3, 15T_{56}^*$	$18T_{787}^*$	87480	$[18, 15, 12, 3^3, 1^{12}]$
$[15, 1^3]$	$(1T_1)^3, 15T_{63}^*$	$18T_{847}^*$	174960	$[18, 15, 12, 9, 6, 1^{13}]$
$[15, 1^3]$	$(1T_1)^3, 15T_{69}^+$	$18T_{856}^+$	262440	$[18, 15, 12, 9, 3^2, 1^{12}]$
$[15, 1^3]$	$(1T_1)^3, 15T_{78}^*$	$18T_{898}^*$	524880	$[18, 15, 12, 9, 6, 3, 1^{12}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_9^*$	36	$[18, 2, 1^{16}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{10}^*$	36	$[18, 2, 1^{16}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{12}^*$	36	$[18, 2, 1^{16}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{13}^*$	36	$[18, 2, 1^{16}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{62}^{+*}$	144	$[18, 2^3, 1^{14}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{109}^*$	288	$[18, 2^4, 1^{13}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{177}^{+*}$	576	$[18, 2^5, 1^{12}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{178}^{+*}$	576	$[18, 2^5, 1^{12}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{263}^*$	1152	$[18, 2^6, 1^{11}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{264}^*$	1152	$[18, 2^6, 1^{11}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{368}^{+*}$	2304	$[18, 2^7, 1^{10}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{369}^{+*}$	2304	$[18, 2^7, 1^{10}]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{459}^*$	4608	$[18, 2^8, 1^9]$
$[2^8, 1^2]$	$(1T_1)^2, (2T_1)^8$	$18T_{460}^*$	4608	$[18, 2^8, 1^9]$
$[4^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (4T_2^{+*})^2$	$18T_{29}^*$	72	$[18, 2^2, 1^{15}]$
$[4^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (4T_2^{+*})^2$	$18T_{31}^{+*}$	72	$[18, 2^2, 1^{15}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

⇒



## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (4T_2^{+*})^2$	$18T_{32}^*$	72	$[18, 2^2, 1^{15}]$
$[4^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (4T_2^{+*})^2$	$18T_{34}^*$	72	$[18, 2^2, 1^{15}]$
$[4^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (4T_2^{+*})^2$	$18T_{60}^*$	144	$[18, 2^3, 1^{14}]$
$[3^4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^4$	$18T_{42}^*$	108	$[18, 3, 2, 1^{15}]$
$[3^4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^4$	$18T_{51}^*$	108	$[18, 3, 2, 1^{15}]$
$[3^4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^4$	$18T_{125}^*$	324	$[18, 3^2, 2, 1^{14}]$
$[3^4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^4$	$18T_{129}^*$	324	$[18, 3^2, 2, 1^{14}]$
$[3^4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^4$	$18T_{201}^*$	648	$[18, 3^2, 2^2, 1^{13}]$
$[3^4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^4$	$18T_{202}^*$	648	$[18, 3^2, 2^2, 1^{13}]$
$[3^4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^4$	$18T_{217}^*$	648	$[18, 3^2, 2^2, 1^{13}]$
$[3^4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^4$	$18T_{223}^*$	648	$[18, 3^2, 2^2, 1^{13}]$
$[3^4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^4$	$18T_{286}^*$	1296	$[18, 3^2, 2^3, 1^{12}]$
$[3^4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (3T_2^*)^4$	$18T_{319}^*$	1296	$[18, 3^2, 2^3, 1^{12}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_1^*)^3$	$18T_{39}^*$	72	$[18, 2^2, 1^{15}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_1^*)^3$	$18T_{40}^*$	72	$[18, 2^2, 1^{15}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 4T_1^*, (4T_3^*)^2$	$18T_{112}^*$	288	$[18, 4, 2^2, 1^{14}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 4T_1^*, (4T_3^*)^2$	$18T_{270}^*$	1152	$[18, 4, 2^4, 1^{12}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_2^{+*})^3$	$18T_{37}^{+*}$	72	$[18, 2^2, 1^{15}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_2^{+*})^3$	$18T_{38}^{+*}$	72	$[18, 2^2, 1^{15}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 4T_2^{+*}, (4T_3^*)^2$	$18T_{113}^{+*}$	288	$[18, 4, 2^2, 1^{14}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 4T_2^{+*}, (4T_3^*)^2$	$18T_{269}^{+*}$	1152	$[18, 4, 2^4, 1^{12}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{66}^*$	144	$[18, 2^3, 1^{14}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{67}^*$	144	$[18, 2^3, 1^{14}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{114}^*$	288	$[18, 4, 2^2, 1^{14}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{115}^{+*}$	288	$[18, 4, 2^2, 1^{14}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{175}^*$	576	$[18, 4, 2^3, 1^{13}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{176}^*$	576	$[18, 4, 2^3, 1^{13}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{268}^{+*}$	1152	$[18, 4, 2^4, 1^{12}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{271}^*$	1152	$[18, 2^6, 1^{11}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{366}^*$	2304	$[18, 4, 2^5, 1^{11}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{367}^*$	2304	$[18, 4, 2^5, 1^{11}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{462}^*$	4608	$[18, 4, 2^6, 1^{10}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{463}^{+*}$	4608	$[18, 4, 2^6, 1^{10}]$
$[4^3, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (4T_3^*)^3$	$18T_{544}^*$	9216	$[18, 4, 2^7, 1^9]$
$[8, 4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 4T_1^*, 8T_2^{+*}$	$18T_{70}^*$	144	$[18, 4, 2, 1^{15}]$
$[8, 4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 4T_2^{+*}, 8T_3^{+*}$	$18T_{72}^{+*}$	144	$[18, 4, 2, 1^{15}]$
$[8, 4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 4T_3^*, 8T_4^{+*}$	$18T_{65}^*$	144	$[18, 4, 2, 1^{15}]$
$[8, 4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 4T_3^*, 8T_4^{+*}$	$18T_{69}^*$	144	$[18, 4, 2, 1^{15}]$
$[8, 4, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 4T_3^*, 8T_9^{+*}$	$18T_{111}^*$	288	$[18, 4, 2^2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_1^*)^2$	$18T_{41}^*$	108	$[18, 3, 2, 1^{15}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_1^*)^2$	$18T_{45}^*$	108	$[18, 6, 1^{16}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_1^*)^2$	$18T_{55}^*$	108	$[18, 3, 2, 1^{15}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_1^*, 6T_2^*$	$18T_{141}^{+*}$	324	$[18, 3^2, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_1^*, 6T_3^*$	$18T_{197}^*$	648	$[18, 6, 3, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 6T_2^*, 6T_3^*$	$18T_{199}^*$	648	$[18, 3^2, 2^2, 1^{13}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{94}^*$	216	$[18, 6, 2, 1^{15}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{100}^{+*}$	216	$[18, 6, 2, 1^{15}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{102}^*$	216	$[18, 6, 2, 1^{15}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{148}^*$	432	$[18, 6, 2^2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{198}^{+*}$	648	$[18, 6, 3, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{200}^*$	648	$[18, 6, 3, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{204}^{+*}$	648	$[18, 6, 3, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{205}^*$	648	$[18, 6, 3, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{209}^{+*}$	648	$[18, 6, 3, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{282}^*$	1296	$[18, 6^2, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{283}^*$	1296	$[18, 6, 3, 2^2, 1^{13}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{285}^*$	1296	$[18, 6^2, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{322}^{+*}$	1296	$[18, 6, 3, 2^2, 1^{13}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{399}^{+*}$	2592	$[18, 6, 3, 2^3, 1^{12}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{400}^*$	2592	$[18, 6^2, 2^2, 1^{13}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{401}^*$	2592	$[18, 6^2, 2^2, 1^{13}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_3^*)^2$	$18T_{472}^*$	5184	$[18, 6^2, 2^3, 1^{12}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_4^{+*})^2$	$18T_{334}^{+*}$	1728	$[18, 6, 2^4, 1^{12}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_4^{+*})^2$	$18T_{335}^{+*}$	1728	$[18, 6, 2^4, 1^{12}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_4^{+*})^2$	$18T_{473}^{+*}$	5184	$[18, 6^2, 2^3, 1^{12}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_5^*)^2$	$18T_{134}^*$	324	$[18, 3^2, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_5^*)^2$	$18T_{136}^*$	324	$[18, 3^2, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_6^*)^2$	$18T_{428}^*$	3456	$[18, 6, 2^5, 1^{11}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_6^*)^2$	$18T_{429}^*$	3456	$[18, 6, 2^5, 1^{11}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_6^*)^2$	$18T_{515}^{+*}$	6912	$[18, 6, 2^6, 1^{10}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_6^*)^2$	$18T_{516}^{+*}$	6912	$[18, 6, 2^6, 1^{10}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_6^*)^2$	$18T_{552}^*$	10368	$[18, 6^2, 2^4, 1^{11}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_6^*)^2$	$18T_{585}^*$	13824	$[18, 6, 2^7, 1^9]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_6^*)^2$	$18T_{586}^*$	13824	$[18, 6, 2^7, 1^9]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_6^*)^2$	$18T_{633}^{+*}$	20736	$[18, 6^2, 2^5, 1^{10}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_6^*)^2$	$18T_{696}^*$	41472	$[18, 6^2, 2^6, 1^9]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_9^*)^2$	$18T_{194}^*$	648	$[18, 6, 3, 2, 1^{14}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_{13}^*)^2$	$18T_{303}^*$	1296	$[18, 6, 3, 2^2, 1^{13}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_{13}^*)^2$	$18T_{312}^*$	1296	$[18, 6, 3, 2^2, 1^{13}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_{13}^*)^2$	$18T_{313}^*$	1296	$[18, 6, 3, 2^2, 1^{13}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_{13}^*)^2$	$18T_{321}^*$	1296	$[18, 6, 3, 2^2, 1^{13}]$
$[6^2, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, (6T_{13}^*)^2$	$18T_{397}^*$	2592	$[18, 6, 3, 2^3, 1^{12}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_1^*$	$18T_{97}^*$	216	$[18, 6, 2, 1^{15}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_1^*$	$18T_{98}^*$	216	$[18, 6, 2, 1^{15}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_2^{+*}$	$18T_{99}^{+*}$	216	$[18, 6, 2, 1^{15}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_2^{+*}$	$18T_{101}^{+*}$	216	$[18, 6, 2, 1^{15}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{10}^{+*}$	$18T_{154}^{+*}$	432	$[18, 12, 2, 1^{15}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{11}^*$	$18T_{152}^*$	432	$[18, 12, 2, 1^{15}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{12}^*$	$18T_{153}^*$	432	$[18, 12, 2, 1^{15}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{13}^*$	$18T_{155}^*$	432	$[18, 12, 2, 1^{15}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{14}^*$	$18T_{147}^*$	432	$[18, 6, 2^2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{14}^*$	$18T_{149}^*$	432	$[18, 6, 2^2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{16}^{+*}$	$18T_{222}^*$	648	$[18, 6, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{17}^*$	$18T_{220}^*$	648	$[18, 6, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{18}^{+*}$	$18T_{225}^{+*}$	648	$[18, 6, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{19}^*$	$18T_{226}^*$	648	$[18, 6, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{28}^*$	$18T_{228}^*$	864	$[18, 12, 2^2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{35}^*$	$18T_{320}^*$	1296	$[18, 6^2, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{36}^*$	$18T_{301}^*$	1296	$[18, 12, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{36}^*$	$18T_{305}^*$	1296	$[18, 12, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{37}^{+*}$	$18T_{311}^{+*}$	1296	$[18, 12, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{37}^{+*}$	$18T_{316}^{+*}$	1296	$[18, 12, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{38}^*$	$18T_{299}^*$	1296	$[18, 12, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{38}^*$	$18T_{310}^*$	1296	$[18, 12, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{39}^*$	$18T_{317}^*$	1296	$[18, 12, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{41}^*$	$18T_{300}^*$	1296	$[18, 12, 3, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{42}^*$	$18T_{308}^*$	1296	$[18, 6^2, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{69}^{+*}$	$18T_{436}^*$	3456	$[18, 6, 2^5, 1^{11}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{69}^{+*}$	$18T_{437}^{+*}$	3456	$[18, 12, 2^4, 1^{12}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{77}^{+*}$	$18T_{403}^{+*}$	2592	$[18, 12, 3, 2^2, 1^{13}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{77}^{+*}$	$18T_{404}^{+*}$	2592	$[18, 12, 3, 2^2, 1^{13}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{77}^{+*}$	$18T_{483}^{+*}$	5184	$[18, 12, 3, 2^3, 1^{12}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{78}^*$	$18T_{394}^*$	2592	$[18, 12, 6, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{79}^*$	$18T_{402}^*$	2592	$[18, 12, 3, 2^2, 1^{13}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{79}^*$	$18T_{405}^*$	2592	$[18, 12, 3, 2^2, 1^{13}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{79}^*$	$18T_{484}^*$	5184	$[18, 12, 3, 2^3, 1^{12}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{81}^*$	$18T_{396}^*$	2592	$[18, 12, 6, 2, 1^{14}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{106}^{+*}$	$18T_{521}^*$	6912	$[18, 12, 2^5, 1^{11}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{125}^*$	$18T_{485}^*$	5184	$[18, 12, 6, 2^2, 1^{13}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{125}^*$	$18T_{486}^*$	5184	$[18, 12, 6, 2^2, 1^{13}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{125}^*$	$18T_{487}^*$	5184	$[18, 12, 6, 2^2, 1^{13}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{125}^*$	$18T_{488}^*$	5184	$[18, 12, 6, 2^2, 1^{13}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{125}^*$	$18T_{556}^*$	10368	$[18, 12, 6, 2^3, 1^{12}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{126}^{+*}$	$18T_{564}^*$	10368	$[18, 6^2, 2^4, 1^{11}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{126}^{+*}$	$18T_{566}^{+*}$	10368	$[18, 12, 6, 2^3, 1^{12}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{135}^*$	$18T_{594}^*$	13824	$[18, 12, 2^6, 1^{10}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{135}^*$	$18T_{595}^{+*}$	13824	$[18, 12, 2^6, 1^{10}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{135}^*$	$18T_{662}^*$	27648	$[18, 12, 2^7, 1^9]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{158}^{+*}$	$18T_{632}^*$	20736	$[18, 12, 6, 2^4, 1^{11}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{208}^*$	$18T_{704}^*$	41472	$[18, 12, 6, 2^5, 1^{10}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{208}^*$	$18T_{711}^{+*}$	41472	$[18, 12, 6, 2^5, 1^{10}]$
$[12, 2^2, 1^2]$	$(1T_1)^2, (2T_1)^2, 12T_{208}^*$	$18T_{764}^*$	82944	$[18, 12, 6, 2^6, 1^9]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_1^*)^4$	$18T_{27}^*$	72	$[18, 4, 1^{16}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_1^*)^4$	$18T_{28}^*$	72	$[18, 4, 1^{16}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_1^*)^4$	$18T_{35}^*$	72	$[18, 4, 1^{16}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^4, 1^2]$	$(1T_1)^2, (4T_1^*)^4$	$18T_{36}^*$	72	$[18, 4, 1^{16}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (4T_3^*)^2$	$18T_{116}^*$	288	$[18, 4, 2^2, 1^{14}]$
$[4^4, 1^2]$	$(1T_1)^2, 4T_1^*, (4T_3^*)^3$	$18T_{277}^*$	1152	$[18, 4, 2^4, 1^{12}]$
$[4^4, 1^2]$	$(1T_1)^2, 4T_1^*, (4T_3^*)^3$	$18T_{279}^*$	1152	$[18, 4, 2^4, 1^{12}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_2^{+*})^2, (4T_3^*)^2$	$18T_{117}^{+*}$	288	$[18, 4, 2^2, 1^{14}]$
$[4^4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, (4T_3^*)^3$	$18T_{276}^{+*}$	1152	$[18, 4, 2^4, 1^{12}]$
$[4^4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, (4T_3^*)^3$	$18T_{278}^{+*}$	1152	$[18, 4, 2^4, 1^{12}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{63}^*$	144	$[18, 4, 2, 1^{15}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{73}^*$	144	$[18, 4, 2, 1^{15}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{183}^*$	576	$[18, 4, 2^3, 1^{13}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{372}^*$	2304	$[18, 4, 2^5, 1^{11}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{375}^*$	2304	$[18, 4, 2^5, 1^{11}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{464}^*$	4608	$[18, 4, 2^6, 1^{10}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{465}^*$	4608	$[18, 4, 2^6, 1^{10}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{466}^{+*}$	4608	$[18, 4, 2^6, 1^{10}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{467}^{+*}$	4608	$[18, 4, 2^6, 1^{10}]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{548}^*$	9216	$[18, 4, 2^7, 1^9]$
$[4^4, 1^2]$	$(1T_1)^2, (4T_3^*)^4$	$18T_{551}^*$	9216	$[18, 4, 2^7, 1^9]$
$[8, 4^2, 1^2]$	$(1T_1)^2, 4T_1^*, 4T_3^*, 8T_{21}^*$	$18T_{185}^*$	576	$[18, 8, 2^2, 1^{14}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, 4T_1^*, 4T_3^*, 8T_{31}^*$	$18T_{374}^*$	2304	$[18, 4^2, 2^3, 1^{12}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_2^{+*})^2, 8T_{22}^{+*}$	$18T_{180}^{+*}$	576	$[18, 8, 2^2, 1^{14}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 4T_3^*, 8T_{31}^*$	$18T_{373}^{+*}$	2304	$[18, 4^2, 2^3, 1^{12}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_9^{+*}$	$18T_{181}^*$	576	$[18, 4^2, 2, 1^{14}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_9^{+*}$	$18T_{186}^{+*}$	576	$[18, 4^2, 2, 1^{14}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{11}^{+*}$	$18T_{187}^*$	576	$[18, 4^2, 2, 1^{14}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{21}^{+*}$	$18T_{179}^*$	576	$[18, 8, 2^2, 1^{14}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{22}^{+*}$	$18T_{266}^*$	1152	$[18, 4^2, 2^2, 1^{13}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{31}^{+*}$	$18T_{267}^*$	1152	$[18, 8, 2^3, 1^{13}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{31}^{+*}$	$18T_{371}^*$	2304	$[18, 4, 2^5, 1^{11}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{31}^{+*}$	$18T_{376}^*$	2304	$[18, 4, 2^5, 1^{11}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{31}^{+*}$	$18T_{461}^*$	4608	$[18, 4^2, 2^4, 1^{11}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{31}^{+*}$	$18T_{545}^{+*}$	9216	$[18, 4^2, 2^5, 1^{10}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{31}^{+*}$	$18T_{546}^*$	9216	$[18, 4^2, 2^5, 1^{10}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{31}^{+*}$	$18T_{550}^*$	9216	$[18, 4^2, 2^5, 1^{10}]$
$[8, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 8T_{31}^{+*}$	$18T_{623}^*$	18432	$[18, 4^2, 2^6, 1^9]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_1^*, (6T_8^*)^2$	$18T_{432}^*$	3456	$[18, 6, 4, 2^3, 1^{12}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_1^*, (6T_8^*)^2$	$18T_{567}^*$	10368	$[18, 6^2, 4, 2^2, 1^{12}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_1^*, (6T_8^*)^2$	$18T_{645}^{+*}$	20736	$[18, 6^2, 4^2, 2, 1^{12}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_1^*, (6T_8^*)^2$	$18T_{708}^*$	41472	$[18, 6^2, 4^3, 1^{12}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, (6T_7^{+*})^2$	$18T_{430}^{+*}$	3456	$[18, 6, 4, 2^3, 1^{12}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, (6T_7^{+*})^2$	$18T_{565}^{+*}$	10368	$[18, 6^2, 4, 2^2, 1^{12}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, (6T_7^{+*})^2$	$18T_{646}^{+*}$	20736	$[18, 6^2, 4^2, 2, 1^{12}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, (6T_7^{+*})^2$	$18T_{703}^{+*}$	41472	$[18, 6^2, 4^3, 1^{12}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{513}^*$	6912	$[18, 6, 4, 2^4, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{589}^*$	13824	$[18, 6, 4, 2^5, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{591}^{+*}$	13824	$[18, 6, 4, 2^5, 1^{10}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{631}^*$	20736	$[18, 6^2, 4, 2^3, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{647}^{+*}$	20736	$[18, 6^2, 4, 2^3, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{657}^*$	27648	$[18, 6, 4, 2^6, 1^9]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{699}^*$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{700}^*$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{701}^{+*}$	41472	$[18, 6^2, 4, 2^4, 1^{10}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{702}^*$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{705}^*$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{706}^{+*}$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{707}^*$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{709}^{+*}$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{710}^*$	41472	$[18, 6^2, 4, 2^4, 1^{10}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{765}^*$	82944	$[18, 6^2, 4^3, 2, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{766}^*$	82944	$[18, 6^2, 4, 2^5, 1^9]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{767}^*$	82944	$[18, 6^2, 4^2, 2^3, 1^{10}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{768}^*$	82944	$[18, 6^2, 4^3, 2, 1^{11}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{786}^{+*}$	82944	$[18, 6^2, 4^2, 2^3, 1^{10}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{838}^{+*}$	165888	$[18, 6^2, 4^3, 2^2, 1^{10}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{839}^*$	165888	$[18, 6^2, 4^2, 2^4, 1^9]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{840}^*$	165888	$[18, 6^2, 4^3, 2^2, 1^{10}]$
$[6^2, 4, 1^2]$	$(1T_1)^2, 4T_3^*, (6T_{11}^*)^2$	$18T_{879}^*$	331776	$[18, 6^2, 4^3, 2^3, 1^9]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 12T_{58}^{+*}$	$18T_{434}^*$	3456	$[18, 6, 4, 2^3, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 12T_{58}^{+*}$	$18T_{435}^*$	3456	$[18, 6, 4, 2^3, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 12T_{108}^{+*}$	$18T_{518}^*$	6912	$[18, 12, 4, 2^3, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 12T_{126}^{+*}$	$18T_{568}^*$	10368	$[18, 6^2, 4, 2^2, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 12T_{161}^{+*}$	$18T_{643}^*$	20736	$[18, 12, 6, 4, 2^2, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 12T_{200}^{+*}$	$18T_{712}^{+*}$	41472	$[18, 12, 6, 4^2, 2, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 12T_{200}^{+*}$	$18T_{721}^*$	41472	$[18, 12, 6, 4^2, 2, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_1^*, 12T_{200}^{+*}$	$18T_{779}^*$	82944	$[18, 12, 6, 4^3, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 12T_{58}^{+*}$	$18T_{431}^*$	3456	$[18, 6, 4, 2^3, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 12T_{58}^{+*}$	$18T_{433}^{+*}$	3456	$[18, 6, 4, 2^3, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 12T_{109}^{+*}$	$18T_{520}^{+*}$	6912	$[18, 12, 4, 2^3, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 12T_{126}^{+*}$	$18T_{569}^{+*}$	10368	$[18, 6^2, 4, 2^2, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 12T_{163}^{+*}$	$18T_{641}^{+*}$	20736	$[18, 12, 6, 4, 2^2, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 12T_{203}^{+*}$	$18T_{715}^{+*}$	41472	$[18, 12, 6, 4^2, 2, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 12T_{203}^{+*}$	$18T_{718}^{+*}$	41472	$[18, 12, 6, 4^2, 2, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_2^{+*}, 12T_{203}^{+*}$	$18T_{776}^{+*}$	82944	$[18, 12, 6, 4^3, 1^{12}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{87}^{+*}$	$18T_{512}^*$	6912	$[18, 6, 4, 2^4, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{87}^{+*}$	$18T_{514}^*$	6912	$[18, 6, 4, 2^4, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{108}^{+*}$	$18T_{517}^*$	6912	$[18, 6, 4, 2^4, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{109}^{+*}$	$18T_{519}^*$	6912	$[18, 6, 4, 2^4, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{134}^*$	$18T_{588}^{+*}$	13824	$[18, 12, 2^6, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{134}^*$	$18T_{590}^*$	13824	$[18, 6, 4, 2^5, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{134}^*$	$18T_{592}^*$	13824	$[18, 12, 2^6, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{134}^*$	$18T_{593}^{+*}$	13824	$[18, 6, 4, 2^5, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{134}^*$	$18T_{656}^*$	27648	$[18, 12, 2^7, 1^9]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{134}^*$	$18T_{658}^*$	27648	$[18, 6, 4, 2^6, 1^9]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{136}^{+*}$	$18T_{587}^*$	13824	$[18, 12, 4, 2^4, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{158}^{+*}$	$18T_{644}^*$	20736	$[18, 6^2, 4, 2^3, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{161}^{+*}$	$18T_{642}^*$	20736	$[18, 6^2, 4, 2^3, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{163}^{+*}$	$18T_{640}^*$	20736	$[18, 6^2, 4, 2^3, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{193}^*$	$18T_{659}^{+*}$	27648	$[18, 12, 4, 2^5, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{193}^*$	$18T_{660}^*$	27648	$[18, 12, 4, 2^5, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{193}^*$	$18T_{661}^*$	27648	$[18, 12, 4, 2^5, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{193}^*$	$18T_{663}^*$	27648	$[18, 12, 4, 2^5, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{193}^*$	$18T_{734}^*$	55296	$[18, 12, 4, 2^6, 1^9]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{195}^{+*}$	$18T_{698}^*$	41472	$[18, 12, 6, 4, 2^3, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{200}^*$	$18T_{713}^{+*}$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{200}^*$	$18T_{716}^*$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{200}^*$	$18T_{783}^*$	82944	$[18, 6^2, 4^3, 2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{203}^{+*}$	$18T_{714}^*$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{203}^{+*}$	$18T_{720}^*$	41472	$[18, 6^2, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{203}^{+*}$	$18T_{773}^*$	82944	$[18, 6^2, 4^3, 2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{208}^*$	$18T_{717}^*$	41472	$[18, 6^2, 4, 2^4, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{208}^*$	$18T_{719}^{+*}$	41472	$[18, 6^2, 4, 2^4, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{208}^*$	$18T_{772}^*$	82944	$[18, 6^2, 4, 2^5, 1^9]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{235}^*$	$18T_{769}^*$	82944	$[18, 12, 6, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{235}^*$	$18T_{777}^{+*}$	82944	$[18, 12, 6, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{235}^*$	$18T_{780}^*$	82944	$[18, 12, 6, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{235}^*$	$18T_{781}^*$	82944	$[18, 12, 6, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{235}^*$	$18T_{837}^*$	165888	$[18, 12, 6, 4^3, 2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{236}^{+*}$	$18T_{770}^*$	82944	$[18, 12, 6, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{236}^{+*}$	$18T_{782}^*$	82944	$[18, 12, 6, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{236}^{+*}$	$18T_{784}^*$	82944	$[18, 12, 6, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{236}^{+*}$	$18T_{785}^*$	82944	$[18, 12, 6, 4^2, 2^2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{236}^{+*}$	$18T_{836}^*$	165888	$[18, 12, 6, 4^3, 2, 1^{11}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{240}^*$	$18T_{771}^{+*}$	82944	$[18, 12, 6, 4, 2^4, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{240}^*$	$18T_{774}^*$	82944	$[18, 12, 6, 4, 2^4, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{240}^*$	$18T_{775}^*$	82944	$[18, 12, 6, 4, 2^4, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{240}^*$	$18T_{778}^*$	82944	$[18, 12, 6, 4, 2^4, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{240}^*$	$18T_{835}^*$	165888	$[18, 12, 6, 4, 2^5, 1^9]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{841}^*$	165888	$[18, 12, 6, 4^2, 2^3, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{842}^*$	165888	$[18, 12, 6, 4^2, 2^3, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{843}^{+*}$	165888	$[18, 12, 6, 4^2, 2^3, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{844}^{+*}$	165888	$[18, 12, 6, 4^2, 2^3, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{880}^*$	331776	$[18, 12, 6, 4^3, 2^2, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{881}^*$	331776	$[18, 12, 6, 4^2, 2^4, 1^9]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{882}^*$	331776	$[18, 12, 6, 4^2, 2^4, 1^9]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{883}^*$	331776	$[18, 12, 6, 4^3, 2^2, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{884}^*$	331776	$[18, 12, 6, 4^3, 2^2, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{885}^*$	331776	$[18, 12, 6, 4^3, 2^2, 1^{10}]$
$[12, 4, 1^2]$	$(1T_1)^2, 4T_3^*, 12T_{260}^*$	$18T_{912}^*$	663552	$[18, 12, 6, 4^3, 2^3, 1^9]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_1^*)^2$	$18T_{59}^*$	144	$[18, 8, 1^{16}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_1^*)^2$	$18T_{71}^*$	144	$[18, 8, 1^{16}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_5^{+*})^2$	$18T_{64}^*$	144	$[18, 8, 1^{16}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_5^{+*})^2$	$18T_{68}^*$	144	$[18, 8, 1^{16}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_8^*)^2$	$18T_{110}^*$	288	$[18, 8, 2, 1^{15}]$
$[8^2, 1^2]$	$(1T_1)^2, 8T_{10}^{+*}, 8T_{16}^*$	$18T_{184}^*$	576	$[18, 8, 2^2, 1^{14}]$
$[8^2, 1^2]$	$(1T_1)^2, 8T_{10}^{+*}, 8T_{20}^{+*}$	$18T_{182}^{+*}$	576	$[18, 8, 2^2, 1^{14}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{12}^{+*})^2$	$18T_{151}^*$	432	$[18, 8, 3, 1^{15}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{12}^{+*})^2$	$18T_{157}^*$	432	$[18, 8, 3, 1^{15}]$
$[8^2, 1^2]$	$(1T_1)^2, 8T_{18}^{+*}, 8T_{26}^*$	$18T_{272}^*$	1152	$[18, 8, 4, 2, 1^{14}]$
$[8^2, 1^2]$	$(1T_1)^2, 8T_{18}^{+*}, 8T_{29}^{+*}$	$18T_{275}^{+*}$	1152	$[18, 8, 4, 2, 1^{14}]$
$[8^2, 1^2]$	$(1T_1)^2, 8T_{19}^{+*}, 8T_{28}^*$	$18T_{274}^*$	1152	$[18, 8, 4, 2, 1^{14}]$
$[8^2, 1^2]$	$(1T_1)^2, 8T_{19}^{+*}, 8T_{30}^*$	$18T_{273}^*$	1152	$[18, 8, 4, 2, 1^{14}]$
$[8^2, 1^2]$	$(1T_1)^2, 8T_{20}^{+*}, 8T_{27}^*$	$18T_{265}^*$	1152	$[18, 8, 2^3, 1^{13}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{23}^*)^2$	$18T_{229}^*$	864	$[18, 8, 6, 1^{15}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{25}^{+*})^2$	$18T_{260}^*$	1008	$[18, 8, 7, 1^{15}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{27}^*)^2$	$18T_{547}^*$	9216	$[18, 8, 2^6, 1^{10}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{27}^*)^2$	$18T_{549}^{+*}$	9216	$[18, 8, 2^6, 1^{10}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{27}^*)^2$	$18T_{625}^*$	18432	$[18, 8, 2^7, 1^9]$
$[8^2, 1^2]$	$(1T_1)^2, 8T_{29}^{+*}, 8T_{35}^*$	$18T_{370}^*$	2304	$[18, 8, 4, 2^2, 1^{13}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{35}^*)^2$	$18T_{626}^*$	18432	$[18, 8, 4, 2^5, 1^{10}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{35}^*)^2$	$18T_{627}^*$	18432	$[18, 8, 4, 2^5, 1^{10}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{35}^*)^2$	$18T_{630}^{+*}$	18432	$[18, 8, 4, 2^5, 1^{10}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{35}^*)^2$	$18T_{691}^*$	36864	$[18, 8, 4, 2^6, 1^9]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{36}^{+*})^2$	$18T_{427}^*$	3024	$[18, 8, 7, 3, 1^{14}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{49}^*)^2$	$18T_{887}^*$	362880	$[18, 8, 7, 6, 5, 4, 3, 1^{11}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{49}^*)^2$	$18T_{888}^*$	362880	$[18, 8, 7, 6, 5, 4, 3, 1^{11}]$
$[8^2, 1^2]$	$(1T_1)^2, (8T_{50}^*)^2$	$18T_{913}^*$	725760	$[18, 8, 7, 6, 5, 4, 3, 2, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1194}^{+*}$	$18T_{622}^{+*}$	18432	$[18, 16, 2^6, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1197}^{+*}$	$18T_{628}^{+*}$	18432	$[18, 16, 2^6, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1210}^*$	$18T_{629}^*$	18432	$[18, 16, 2^6, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1223}^*$	$18T_{624}^*$	18432	$[18, 16, 2^6, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1351}^*$	$18T_{689}^*$	36864	$[18, 16, 2^7, 1^9]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1469}^*$	$18T_{695}^*$	36864	$[18, 16, 4, 2^5, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1484}^*$	$18T_{690}^*$	36864	$[18, 16, 2^7, 1^9]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1487}^*$	$18T_{694}^*$	36864	$[18, 16, 4, 2^5, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1489}^*$	$18T_{693}^*$	36864	$[18, 16, 4, 2^5, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1491}^{+*}$	$18T_{692}^{+*}$	36864	$[18, 16, 4, 2^5, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1542}^{+*}$	$18T_{735}^{+*}$	55296	$[18, 16, 6, 2^5, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1643}^*$	$18T_{763}^*$	73728	$[18, 16, 4, 2^6, 1^9]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1670}^*$	$18T_{799}^*$	110592	$[18, 16, 6, 2^6, 1^9]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1685}^{+*}$	$18T_{801}^{+*}$	110592	$[18, 16, 12, 2^5, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[16, 1^2]$	$(1T_1)^2, 16T_{1692}^*$	$18T_{800}^*$	110592	$[18, 16, 12, 2^5, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1694}^{+*}$	$18T_{802}^+$	129024	$[18, 16, 14, 2^5, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1761}^*$	$18T_{854}^*$	221184	$[18, 16, 12, 2^6, 1^9]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1768}^*$	$18T_{855}^*$	258048	$[18, 16, 14, 2^6, 1^9]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1800}^{+*}$	$18T_{890}^+$	387072	$[18, 16, 14, 6, 2^4, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1841}^*$	$18T_{914}^*$	774144	$[18, 16, 14, 6, 2^5, 1^9]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1938}^+$	$18T_{963}^+$	46448640	$[18, 16, 14, 12, 10, 8, 6, 2, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1944}^+$	$18T_{966}^+$	92897280	$[18, 16, 14, 12, 10, 8, 6, 2^2, 1^9]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1945}^+$	$18T_{964}^+$	92897280	$[18, 16, 14, 12, 10, 8, 6, 4, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1946}^+$	$18T_{965}^+$	92897280	$[18, 16, 14, 12, 10, 8, 6, 4, 1^{10}]$
$[16, 1^2]$	$(1T_1)^2, 16T_{1948}^+$	$18T_{968}^+$	185794560	$[18, 16, 14, 12, 10, 8, 6, 4, 2, 1^9]$
$[6, 3, 2^4, 1]$	$1T_1, (2T_1)^4, 3T_2^*, 6T_2^*$	$18T_{50}^*$	108	$[18, 3, 2, 1^{15}]$
$[6, 3, 2^4, 1]$	$1T_1, (2T_1)^4, 3T_2^*, 6T_2^*$	$18T_{58}^*$	108	$[18, 3, 2, 1^{15}]$
$[9, 2^4, 1]$	$1T_1, (2T_1)^4, 9T_3^{+*}$	$18T_{130}^*$	324	$[18, 9, 2, 1^{15}]$
$[9, 2^4, 1]$	$1T_1, (2T_1)^4, 9T_3^{+*}$	$18T_{140}^*$	324	$[18, 9, 2, 1^{15}]$
$[9, 2^4, 1]$	$1T_1, (2T_1)^4, 9T_3^{+*}$	$18T_{211}^*$	648	$[18, 9, 2^2, 1^{14}]$
$[9, 2^4, 1]$	$1T_1, (2T_1)^4, 9T_5^{+*}$	$18T_{128}^*$	324	$[18, 9, 2, 1^{15}]$
$[9, 2^4, 1]$	$1T_1, (2T_1)^4, 9T_5^{+*}$	$18T_{138}^*$	324	$[18, 9, 2, 1^{15}]$
$[9, 2^4, 1]$	$1T_1, (2T_1)^4, 9T_5^{+*}$	$18T_{213}^*$	648	$[18, 9, 2^2, 1^{14}]$
$[6, 4, 3, 2^2, 1]$	$1T_1, (2T_1)^2, 3T_2^*, 4T_2^{+*}, 6T_3^*$	$18T_{95}^{+*}$	216	$[18, 3, 2^2, 1^{14}]$
$[6, 4, 3, 2^2, 1]$	$1T_1, (2T_1)^2, 3T_2^*, 4T_2^{+*}, 6T_3^*$	$18T_{96}^*$	216	$[18, 3, 2^2, 1^{14}]$
$[6, 4, 3, 2^2, 1]$	$1T_1, (2T_1)^2, 3T_2^*, 4T_2^{+*}, 6T_3^*$	$18T_{104}^*$	216	$[18, 3, 2^2, 1^{14}]$
$[6, 4, 3, 2^2, 1]$	$1T_1, (2T_1)^2, 3T_2^*, 4T_2^{+*}, 6T_3^*$	$18T_{106}^*$	216	$[18, 3, 2^2, 1^{14}]$
$[6, 4, 3, 2^2, 1]$	$1T_1, (2T_1)^2, 3T_2^*, 4T_2^{+*}, 6T_3^*$	$18T_{150}^*$	432	$[18, 3, 2^3, 1^{13}]$
$[9, 4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}, 9T_8^*$	$18T_{190}^*$	648	$[18, 9, 2^2, 1^{14}]$
$[9, 4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}, 9T_8^*$	$18T_{193}^*$	648	$[18, 9, 2^2, 1^{14}]$
$[9, 4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}, 9T_8^*$	$18T_{195}^{+*}$	648	$[18, 9, 2^2, 1^{14}]$
$[9, 4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}, 9T_8^*$	$18T_{210}^*$	648	$[18, 9, 2^2, 1^{14}]$
$[9, 4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}, 9T_8^*$	$18T_{216}^*$	648	$[18, 9, 2^2, 1^{14}]$
$[9, 4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}, 9T_8^*$	$18T_{287}^*$	1296	$[18, 9, 2^3, 1^{13}]$
$[9, 4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}, 9T_8^*$	$18T_{289}^*$	1296	$[18, 9, 2^3, 1^{13}]$
$[9, 4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}, 9T_8^*$	$18T_{295}^{+*}$	1296	$[18, 9, 2^3, 1^{13}]$
$[9, 4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}, 9T_8^*$	$18T_{296}^*$	1296	$[18, 9, 2^3, 1^{13}]$
$[9, 4, 2^2, 1]$	$1T_1, (2T_1)^2, 4T_2^{+*}, 9T_8^*$	$18T_{388}^*$	2592	$[18, 9, 2^4, 1^{12}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{124}^*$	324	$[18, 3^2, 2, 1^{14}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{133}^*$	324	$[18, 3^2, 2, 1^{14}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{234}^*$	972	$[18, 3^3, 2, 1^{13}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{238}^*$	972	$[18, 3^3, 2, 1^{13}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{240}^{+*}$	972	$[18, 3^3, 2, 1^{13}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{254}^*$	972	$[18, 3^3, 2, 1^{13}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{256}^*$	972	$[18, 3^3, 2, 1^{13}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{258}^{+*}$	972	$[18, 3^3, 2, 1^{13}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{339}^*$	1944	$[18, 3^3, 2^2, 1^{12}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{351}^*$	1944	$[18, 3^3, 2^2, 1^{12}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{408}^*$	2916	$[18, 3^4, 2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees





## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{426}^*$	2916	$[18, 3^4, 2, 1^{12}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{530}^{+*}$	8748	$[18, 3^5, 2, 1^{11}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{532}^*$	8748	$[18, 3^5, 2, 1^{11}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{538}^{+*}$	8748	$[18, 3^5, 2, 1^{11}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{539}^*$	8748	$[18, 3^5, 2, 1^{11}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{599}^*$	17496	$[18, 3^5, 2^2, 1^{10}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{609}^*$	17496	$[18, 3^5, 2^2, 1^{10}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{616}^*$	17496	$[18, 3^5, 2^2, 1^{10}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{619}^*$	17496	$[18, 3^5, 2^2, 1^{10}]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{669}^*$	34992	$[18, 3^5, 2^3, 1^9]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{671}^{+*}$	34992	$[18, 3^5, 2^3, 1^9]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{676}^*$	34992	$[18, 3^5, 2^3, 1^9]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{682}^{+*}$	34992	$[18, 3^5, 2^3, 1^9]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{738}^*$	69984	$[18, 3^5, 2^4, 1^8]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{745}^*$	69984	$[18, 3^5, 2^4, 1^8]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{749}^*$	69984	$[18, 3^5, 2^4, 1^8]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{761}^*$	69984	$[18, 3^5, 2^4, 1^8]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{806}^*$	139968	$[18, 3^5, 2^5, 1^7]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{808}^{+*}$	139968	$[18, 3^5, 2^5, 1^7]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{827}^*$	139968	$[18, 3^5, 2^5, 1^7]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{830}^{+*}$	139968	$[18, 3^5, 2^5, 1^7]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{857}^*$	279936	$[18, 3^5, 2^6, 1^6]$
$[3^5, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^5$	$18T_{874}^*$	279936	$[18, 3^5, 2^6, 1^6]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{13}^*$	$18T_{239}^*$	972	$[18, 9, 3, 2, 1^{14}]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{13}^*$	$18T_{409}^*$	2916	$[18, 9, 3^2, 2, 1^{13}]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{13}^*$	$18T_{412}^{+*}$	2916	$[18, 9, 3^2, 2, 1^{13}]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{13}^*$	$18T_{492}^*$	5832	$[18, 9, 3^2, 2^2, 1^{12}]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{22}^*$	$18T_{534}^*$	8748	$[18, 9, 3^3, 2, 1^{12}]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{22}^*$	$18T_{650}^*$	26244	$[18, 9, 3^4, 2, 1^{11}]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{22}^*$	$18T_{651}^{+*}$	26244	$[18, 9, 3^4, 2, 1^{11}]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{22}^*$	$18T_{725}^*$	52488	$[18, 9, 3^4, 2^2, 1^{10}]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{25}^{+*}$	$18T_{853}^*$	209952	$[18, 9, 3^4, 2^4, 1^8]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{28}^*$	$18T_{891}^*$	419904	$[18, 9, 3^4, 2^5, 1^7]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{28}^*$	$18T_{892}^{+*}$	419904	$[18, 9, 3^4, 2^5, 1^7]$
$[9, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^2, 9T_{28}^*$	$18T_{915}^*$	839808	$[18, 9, 3^4, 2^6, 1^6]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_1^*, 6T_5^*$	$18T_{121}^*$	324	$[18, 3^2, 2, 1^{14}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_1^*, 6T_5^*$	$18T_{122}^*$	324	$[18, 3^2, 2, 1^{14}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_1^*, 6T_5^*$	$18T_{132}^*$	324	$[18, 3^2, 2, 1^{14}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_1^*, 6T_5^*$	$18T_{139}^*$	324	$[18, 3^2, 2, 1^{14}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_1^*, 6T_5^*$	$18T_{232}^*$	972	$[18, 3^3, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_1^*, 6T_5^*$	$18T_{236}^*$	972	$[18, 3^3, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_3^*)^2$	$18T_{105}^*$	216	$[18, 3, 2^2, 1^{14}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_3^*, 6T_9^*$	$18T_{191}^*$	648	$[18, 6, 3, 2, 1^{14}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_3^*, 6T_9^*$	$18T_{342}^*$	1944	$[18, 6, 3^2, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_3^*, 6T_9^*$	$18T_{344}^{+*}$	1944	$[18, 6, 3^2, 2, 1^{13}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_3^*, 6T_9^*$	$18T_{350}^*$	1944	$[18, 6, 3^2, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_3^*, 6T_9^*$	$18T_{354}^*$	1944	$[18, 6, 3^2, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_3^*, 6T_9^*$	$18T_{441}^*$	3888	$[18, 6, 3^2, 2^2, 1^{12}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_5^*)^2$	$18T_{142}^{+*}$	324	$[18, 3^2, 2, 1^{14}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_5^*)^2$	$18T_{252}^*$	972	$[18, 3^3, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_5^*)^2$	$18T_{255}^*$	972	$[18, 3^3, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_5^*)^2$	$18T_{257}^*$	972	$[18, 3^3, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_5^*)^2$	$18T_{407}^*$	2916	$[18, 3^4, 2, 1^{12}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_5^*)^2$	$18T_{411}^*$	2916	$[18, 3^4, 2, 1^{12}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_5^*)^2$	$18T_{422}^*$	2916	$[18, 3^4, 2, 1^{12}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_5^*)^2$	$18T_{542}^*$	8748	$[18, 3^5, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_5^*)^2$	$18T_{543}^{+*}$	8748	$[18, 3^5, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_5^*, 6T_9^*$	$18T_{611}^*$	17496	$[18, 6, 3^4, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{206}^{+*}$	648	$[18, 6, 3, 2, 1^{14}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{341}^*$	1944	$[18, 6, 3^2, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{347}^*$	1944	$[18, 6, 3^2, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{348}^{+*}$	1944	$[18, 6, 3^2, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{439}^*$	3888	$[18, 6^2, 3, 2, 1^{13}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{494}^*$	5832	$[18, 6, 3^3, 2, 1^{12}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{502}^{+*}$	5832	$[18, 6, 3^3, 2, 1^{12}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{503}^*$	5832	$[18, 6, 3^3, 2, 1^{12}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{571}^*$	11664	$[18, 6^2, 3^2, 2, 1^{12}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{601}^*$	17496	$[18, 6, 3^4, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{602}^{+*}$	17496	$[18, 6, 3^4, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{606}^{+*}$	17496	$[18, 6, 3^4, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{607}^{+*}$	17496	$[18, 6, 3^4, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{608}^*$	17496	$[18, 6, 3^4, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{612}^*$	17496	$[18, 6, 3^4, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{615}^*$	17496	$[18, 6, 3^4, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{670}^*$	34992	$[18, 6, 3^4, 2^2, 1^{10}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{673}^*$	34992	$[18, 6^2, 3^3, 2, 1^{11}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{675}^*$	34992	$[18, 6, 3^4, 2^2, 1^{10}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{687}^{+*}$	34992	$[18, 6, 3^4, 2^2, 1^{10}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{742}^*$	69984	$[18, 6^2, 3^3, 2^2, 1^{10}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{743}^{+*}$	69984	$[18, 6, 3^4, 2^3, 1^9]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_9^*)^2$	$18T_{807}^*$	139968	$[18, 6^2, 3^3, 2^3, 1^9]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_9^*, 6T_{10}^{+*}$	$18T_{753}^{+*}$	69984	$[18, 3^5, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_9^*, 6T_{13}^*$	$18T_{812}^{+*}$	139968	$[18, 6, 3^4, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{10}^{+*})^2$	$18T_{688}^{+*}$	34992	$[18, 6, 3^4, 2^2, 1^{10}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{10}^{+*})^2$	$18T_{746}^{+*}$	69984	$[18, 6, 3^4, 2^3, 1^9]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{10}^{+*})^2$	$18T_{810}^{+*}$	139968	$[18, 6^2, 3^3, 2^3, 1^9]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 6T_{10}^{+*}, 6T_{13}^*$	$18T_{813}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{683}^*$	34992	$[18, 6, 3^4, 2^2, 1^{10}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{686}^*$	34992	$[18, 6, 3^4, 2^2, 1^{10}]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{739}^*$	69984	$[18, 6, 3^4, 2^3, 1^9]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{741}^{+*}$	69984	$[18, 6, 3^4, 2^3, 1^9]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{744}^*$	69984	$[18, 6, 3^4, 2^3, 1^9]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{747}^*$	69984	$[18, 6, 3^4, 2^3, 1^9]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{748}^*$	69984	$[18, 6, 3^4, 2^3, 1^9]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{750}^*$	69984	$[18, 3^5, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{751}^*$	69984	$[18, 3^5, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{803}^{+*}$	139968	$[18, 6, 3^4, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{804}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{805}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{809}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{811}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{814}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{831}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{832}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{858}^*$	279936	$[18, 6^2, 3^3, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{859}^*$	279936	$[18, 6, 3^4, 2^5, 1^7]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{860}^*$	279936	$[18, 6^2, 3^3, 2^4, 1^8]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{866}^{+*}$	279936	$[18, 6, 3^4, 2^5, 1^7]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{868}^*$	279936	$[18, 6, 3^4, 2^5, 1^7]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{875}^*$	279936	$[18, 6, 3^4, 2^5, 1^7]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{876}^*$	279936	$[18, 6, 3^4, 2^5, 1^7]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{878}^{+*}$	279936	$[18, 6, 3^4, 2^5, 1^7]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{903}^*$	559872	$[18, 6, 3^4, 2^6, 1^6]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{904}^*$	559872	$[18, 6^2, 3^3, 2^5, 1^7]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{905}^*$	559872	$[18, 6, 3^4, 2^6, 1^6]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{906}^{+*}$	559872	$[18, 6^2, 3^3, 2^5, 1^7]$
$[6^2, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, (6T_{13}^*)^2$	$18T_{926}^*$	1119744	$[18, 6^2, 3^3, 2^6, 1^6]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{16}^{+*}$	$18T_{218}^*$	648	$[18, 6, 3, 2, 1^{14}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{18}^{+*}$	$18T_{219}^*$	648	$[18, 6, 3, 2, 1^{14}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{37}^{+*}$	$18T_{315}^*$	1296	$[18, 12, 3, 2, 1^{14}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{71}^{+*}$	$18T_{358}^{+*}$	1944	$[18, 6, 3^2, 2, 1^{13}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{71}^{+*}$	$18T_{359}^{+*}$	1944	$[18, 6, 3^2, 2, 1^{13}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{72}^*$	$18T_{360}^*$	1944	$[18, 6, 3^2, 2, 1^{13}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{72}^*$	$18T_{361}^*$	1944	$[18, 6, 3^2, 2, 1^{13}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{116}^*$	$18T_{444}^*$	3888	$[18, 6^2, 3, 2, 1^{13}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{116}^*$	$18T_{447}^*$	3888	$[18, 6^2, 3, 2, 1^{13}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{117}^{+*}$	$18T_{448}^{+*}$	3888	$[18, 12, 3^2, 2, 1^{13}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{118}^*$	$18T_{446}^*$	3888	$[18, 12, 3^2, 2, 1^{13}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{119}^*$	$18T_{445}^*$	3888	$[18, 12, 3^2, 2, 1^{13}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{120}^*$	$18T_{449}^*$	3888	$[18, 12, 3^2, 2, 1^{13}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{130}^{+*}$	$18T_{499}^{+*}$	5832	$[18, 6, 3^3, 2, 1^{12}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{130}^{+*}$	$18T_{500}^{+*}$	5832	$[18, 6, 3^3, 2, 1^{12}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{130}^{+*}$	$18T_{618}^{+*}$	17496	$[18, 6, 3^4, 2, 1^{11}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{130}^{+*}$	$18T_{621}^*$	17496	$[18, 6, 3^4, 2, 1^{11}]$
$[12, 3, 2, 1]$	$1T_1, 2T_1, 3T_2^*, 12T_{131}^*$	$18T_{501}^*$	5832	$[18, 6, 3^3, 2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\implies$

Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{131}^*$	$18T_{504}^*$	5832	$[18, 6, 3^3, 2, 1^{12}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{131}^*$	$18T_{620}^*$	17496	$[18, 6, 3^4, 2, 1^{11}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{156}^*$	$18T_{523}^*$	7776	$[18, 12, 6, 3, 2, 1^{13}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{167}^*$	$18T_{570}^*$	11664	$[18, 6^2, 3^2, 2, 1^{12}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{167}^*$	$18T_{572}^*$	11664	$[18, 6^2, 3^2, 2, 1^{12}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{167}^*$	$18T_{677}^*$	34992	$[18, 6^2, 3^3, 2, 1^{11}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{168}^{+*}$	$18T_{580}^{+*}$	11664	$[18, 12, 3^3, 2, 1^{12}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{168}^{+*}$	$18T_{678}^*$	34992	$[18, 12, 3^4, 2, 1^{11}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{168}^{+*}$	$18T_{679}^{+*}$	34992	$[18, 12, 3^4, 2, 1^{11}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{169}^*$	$18T_{579}^*$	11664	$[18, 12, 3^3, 2, 1^{12}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{169}^*$	$18T_{582}^*$	11664	$[18, 12, 3^3, 2, 1^{12}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{169}^*$	$18T_{680}^*$	34992	$[18, 12, 3^4, 2, 1^{11}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{169}^*$	$18T_{685}^*$	34992	$[18, 12, 3^4, 2, 1^{11}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{170}^*$	$18T_{581}^*$	11664	$[18, 12, 3^3, 2, 1^{12}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{170}^*$	$18T_{681}^{+*}$	34992	$[18, 12, 3^4, 2, 1^{11}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{170}^*$	$18T_{684}^*$	34992	$[18, 12, 3^4, 2, 1^{11}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{210}^{+*}$	$18T_{754}^{+*}$	69984	$[18, 12, 3^4, 2^2, 1^{10}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{210}^{+*}$	$18T_{755}^{+*}$	69984	$[18, 12, 3^4, 2^2, 1^{10}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{210}^{+*}$	$18T_{757}^*$	69984	$[18, 6, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{210}^{+*}$	$18T_{826}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{210}^{+*}$	$18T_{829}^{+*}$	139968	$[18, 12, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{211}^*$	$18T_{759}^*$	69984	$[18, 12, 3^4, 2^2, 1^{10}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{211}^*$	$18T_{818}^{+*}$	139968	$[18, 6, 3^4, 2^4, 1^8]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{211}^*$	$18T_{820}^*$	139968	$[18, 12, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{214}^{+*}$	$18T_{756}^{+*}$	69984	$[18, 12, 3^4, 2^2, 1^{10}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{214}^{+*}$	$18T_{758}^*$	69984	$[18, 6, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{214}^{+*}$	$18T_{760}^{+*}$	69984	$[18, 12, 3^4, 2^2, 1^{10}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{214}^{+*}$	$18T_{816}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{214}^{+*}$	$18T_{821}^{+*}$	139968	$[18, 12, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{215}^{+*}$	$18T_{762}^*$	69984	$[18, 6, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{215}^{+*}$	$18T_{815}^*$	139968	$[18, 6, 3^4, 2^4, 1^8]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{215}^{+*}$	$18T_{824}^{+*}$	139968	$[18, 12, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{217}^*$	$18T_{649}^*$	23328	$[18, 12, 6, 3^2, 2, 1^{12}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{217}^*$	$18T_{740}^*$	69984	$[18, 12, 6, 3^3, 2, 1^{11}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{217}^*$	$18T_{752}^*$	69984	$[18, 12, 3^4, 2^2, 1^{10}]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{242}^{+*}$	$18T_{817}^*$	139968	$[18, 12, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{242}^{+*}$	$18T_{822}^*$	139968	$[18, 12, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{242}^{+*}$	$18T_{823}^*$	139968	$[18, 12, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{242}^{+*}$	$18T_{833}^*$	139968	$[18, 12, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{242}^{+*}$	$18T_{862}^*$	279936	$[18, 12, 3^4, 2^4, 1^8]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{242}^{+*}$	$18T_{863}^*$	279936	$[18, 12, 3^4, 2^4, 1^8]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{243}^{+*}$	$18T_{825}^*$	139968	$[18, 12, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{243}^{+*}$	$18T_{834}^*$	139968	$[18, 12, 3^4, 2^3, 1^9]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{243}^{+*}$	$18T_{864}^*$	279936	$[18, 12, 3^4, 2^4, 1^8]$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{243}^{+*}$	$18T_{872}^*$	279936	$[18, 12, 3^4, 2^4, 1^8]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{244}^{+*}$	$18T_{877}^*$	279936	[18, 12, 3 <sup>4</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{245}^{+*}$	$18T_{873}^*$	279936	[18, 12, 3 <sup>4</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{247}^{+*}$	$18T_{861}^{+*}$	279936	[18, 12, 3 <sup>4</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{247}^{+*}$	$18T_{869}^*$	279936	[18, 12, 3 <sup>4</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{248}^{+*}$	$18T_{819}^*$	139968	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{248}^{+*}$	$18T_{828}^*$	139968	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{248}^{+*}$	$18T_{865}^*$	279936	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>9</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{248}^{+*}$	$18T_{871}^*$	279936	[18, 6 <sup>2</sup> , 3 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{249}^{+*}$	$18T_{867}^{+*}$	279936	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>9</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{249}^{+*}$	$18T_{870}^*$	279936	[18, 6 <sup>2</sup> , 3 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{261}^{+*}$	$18T_{909}^*$	559872	[18, 12, 3 <sup>4</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{261}^{+*}$	$18T_{910}^{+*}$	559872	[18, 12, 3 <sup>4</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{261}^{+*}$	$18T_{930}^*$	1119744	[18, 12, 3 <sup>4</sup> , 2 <sup>6</sup> , 1 <sup>6</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{264}^{+*}$	$18T_{907}^*$	559872	[18, 12, 3 <sup>4</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{264}^{+*}$	$18T_{908}^{+*}$	559872	[18, 12, 3 <sup>4</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{264}^{+*}$	$18T_{929}^*$	1119744	[18, 12, 3 <sup>4</sup> , 2 <sup>6</sup> , 1 <sup>6</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{266}^{+*}$	$18T_{902}^*$	559872	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{267}^{+*}$	$18T_{901}^*$	559872	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{274}^{+*}$	$18T_{927}^{+*}$	1119744	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{274}^{+*}$	$18T_{928}^*$	1119744	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{274}^{+*}$	$18T_{931}^*$	1119744	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{274}^{+*}$	$18T_{932}^*$	1119744	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[12, 3, 2, 1]	$1T_1, 2T_1, 3T_2^*, 12T_{274}^{+*}$	$18T_{945}^*$	2239488	[18, 12, 6, 3 <sup>3</sup> , 2 <sup>6</sup> , 1 <sup>6</sup> ]
[10, 5, 2, 1]	$1T_1, 2T_1, 5T_2^{+*}, 10T_3^*$	$18T_{145}^+$	360	[18, 5, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[10, 5, 2, 1]	$1T_1, 2T_1, 5T_3^*, 10T_4^*$	$18T_{146}^*$	360	[18, 5, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[10, 5, 2, 1]	$1T_1, 2T_1, 5T_3^*, 10T_5^*$	$18T_{227}^*$	720	[18, 5, 4, 2, 1 <sup>14</sup> ]
[10, 5, 2, 1]	$1T_1, 2T_1, 5T_4^{+*}, 10T_{11}^*$	$18T_{363}^+$	2160	[18, 5, 4, 3, 2, 1 <sup>13</sup> ]
[10, 5, 2, 1]	$1T_1, 2T_1, 5T_5^*, 10T_{12}^*$	$18T_{364}^*$	2160	[18, 5, 4, 3, 2, 1 <sup>13</sup> ]
[10, 5, 2, 1]	$1T_1, 2T_1, 5T_5^*, 10T_{22}^*$	$18T_{452}^*$	4320	[18, 5, 4, 3, 2 <sup>2</sup> , 1 <sup>12</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{10}^{+*}$	$18T_{233}^*$	972	[18, 9, 3, 2, 1 <sup>14</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{10}^{+*}$	$18T_{235}^*$	972	[18, 9, 3, 2, 1 <sup>14</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{10}^{+*}$	$18T_{247}^*$	972	[18, 9, 3, 2, 1 <sup>14</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{10}^{+*}$	$18T_{253}^*$	972	[18, 9, 3, 2, 1 <sup>14</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{10}^{+*}$	$18T_{338}^*$	1944	[18, 9, 3, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{10}^{+*}$	$18T_{353}^*$	1944	[18, 9, 3, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{10}^{+*}$	$18T_{413}^*$	2916	[18, 9, 3 <sup>2</sup> , 2, 1 <sup>13</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{10}^{+*}$	$18T_{415}^*$	2916	[18, 9, 3 <sup>2</sup> , 2, 1 <sup>13</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{10}^{+*}$	$18T_{491}^*$	5832	[18, 9, 3 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>12</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{11}^{+*}$	$18T_{230}^*$	972	[18, 9, 3, 2, 1 <sup>14</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{11}^{+*}$	$18T_{231}^*$	972	[18, 9, 3, 2, 1 <sup>14</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{11}^{+*}$	$18T_{248}^*$	972	[18, 9, 3, 2, 1 <sup>14</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{11}^{+*}$	$18T_{251}^*$	972	[18, 9, 3, 2, 1 <sup>14</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{11}^{+*}$	$18T_{340}^*$	1944	[18, 9, 3, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{11}^{+*}$	$18T_{357}^*$	1944	[18, 9, 3, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{11}^{+*}$	$18T_{410}^*$	2916	[18, 9, 3 <sup>2</sup> , 2, 1 <sup>13</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{11}^{+*}$	$18T_{414}^*$	2916	$[18, 9, 3^2, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_1^*, 9T_{11}^{+*}$	$18T_{493}^*$	5832	$[18, 9, 3^2, 2^2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_8^*$	$18T_{215}^*$	648	$[18, 6, 3, 2, 1^{14}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{343}^*$	1944	$[18, 9, 6, 2, 1^{14}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{345}^*$	1944	$[18, 9, 6, 2, 1^{14}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{355}^*$	1944	$[18, 9, 6, 2, 1^{14}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{356}^*$	1944	$[18, 9, 6, 2, 1^{14}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{440}^*$	3888	$[18, 9, 6, 2^2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{495}^*$	5832	$[18, 9, 6, 3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{496}^{+*}$	5832	$[18, 9, 6, 3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{497}^{+*}$	5832	$[18, 9, 6, 3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{498}^*$	5832	$[18, 9, 6, 3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{507}^*$	5832	$[18, 9, 6, 3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{508}^*$	5832	$[18, 9, 6, 3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{509}^*$	5832	$[18, 9, 6, 3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{573}^*$	11664	$[18, 9, 6, 3, 2^2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{574}^*$	11664	$[18, 9, 6, 3, 2^2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{575}^*$	11664	$[18, 9, 6^2, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{576}^*$	11664	$[18, 9, 6, 3, 2^2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{577}^*$	11664	$[18, 9, 6^2, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{578}^{+*}$	11664	$[18, 9, 6, 3, 2^2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_3^*, 9T_{18}^*$	$18T_{648}^*$	23328	$[18, 9, 6^2, 2^2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{10}^{+*}$	$18T_{246}^*$	972	$[18, 3^3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{10}^{+*}$	$18T_{249}^*$	972	$[18, 3^3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{10}^{+*}$	$18T_{416}^*$	2916	$[18, 3^4, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{10}^{+*}$	$18T_{420}^*$	2916	$[18, 3^4, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{11}^{+*}$	$18T_{245}^*$	972	$[18, 3^3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{11}^{+*}$	$18T_{259}^*$	972	$[18, 3^3, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{11}^{+*}$	$18T_{417}^*$	2916	$[18, 3^4, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{11}^{+*}$	$18T_{423}^*$	2916	$[18, 3^4, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{21}^{+*}$	$18T_{536}^*$	8748	$[18, 9, 3^3, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{21}^{+*}$	$18T_{540}^*$	8748	$[18, 9, 3^3, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{21}^{+*}$	$18T_{654}^*$	26244	$[18, 9, 3^4, 2, 1^{11}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{21}^{+*}$	$18T_{655}^*$	26244	$[18, 9, 3^4, 2, 1^{11}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_5^*, 9T_{21}^{+*}$	$18T_{733}^*$	52488	$[18, 9, 3^4, 2^2, 1^{10}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{18}^*$	$18T_{352}^*$	1944	$[18, 6, 3^2, 2, 1^{13}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{18}^*$	$18T_{505}^*$	5832	$[18, 6, 3^3, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{603}^*$	17496	$[18, 9, 6, 3^2, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{604}^{+*}$	17496	$[18, 9, 6, 3^2, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{613}^*$	17496	$[18, 9, 6, 3^2, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{617}^*$	17496	$[18, 9, 6, 3^2, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{674}^*$	34992	$[18, 9, 6^2, 3, 2, 1^{12}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{726}^*$	52488	$[18, 9, 6, 3^3, 2, 1^{11}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{727}^*$	52488	$[18, 9, 6, 3^3, 2, 1^{11}]$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{728}^{+*}$	52488	$[18, 9, 6, 3^3, 2, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{729}^{+*}$	52488	[18, 9, 6, 3 <sup>3</sup> , 2, 1 <sup>11</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{730}^*$	52488	[18, 9, 3 <sup>4</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{731}^*$	52488	[18, 9, 6, 3 <sup>3</sup> , 2, 1 <sup>11</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{732}^*$	52488	[18, 9, 3 <sup>4</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{793}^*$	104976	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{794}^*$	104976	[18, 9, 6 <sup>2</sup> , 3 <sup>2</sup> , 2, 1 <sup>11</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{795}^{+*}$	104976	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{796}^*$	104976	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{797}^*$	104976	[18, 9, 6 <sup>2</sup> , 3 <sup>2</sup> , 2, 1 <sup>11</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{798}^*$	104976	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_9^*, 9T_{24}^*$	$18T_{852}^*$	209952	[18, 9, 6 <sup>2</sup> , 3 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{29}^*$	$18T_{895}^{+*}$	419904	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{29}^*$	$18T_{896}^*$	419904	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{29}^*$	$18T_{923}^*$	839808	[18, 9, 6 <sup>2</sup> , 3 <sup>2</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{30}^{+*}$	$18T_{893}^*$	419904	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{30}^{+*}$	$18T_{894}^*$	419904	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{30}^{+*}$	$18T_{920}^*$	839808	[18, 9, 6 <sup>2</sup> , 3 <sup>2</sup> , 2 <sup>4</sup> , 1 <sup>8</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{916}^*$	839808	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{917}^*$	839808	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{918}^{+*}$	839808	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{919}^{+*}$	839808	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{921}^*$	839808	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{922}^*$	839808	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{924}^*$	839808	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{939}^*$	1679616	[18, 9, 6 <sup>2</sup> , 3 <sup>2</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{940}^*$	1679616	[18, 9, 6 <sup>2</sup> , 3 <sup>2</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{941}^*$	1679616	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>6</sup> , 1 <sup>6</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{942}^*$	1679616	[18, 9, 6, 3 <sup>3</sup> , 2 <sup>6</sup> , 1 <sup>6</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{943}^{+*}$	1679616	[18, 9, 6 <sup>2</sup> , 3 <sup>2</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{944}^*$	1679616	[18, 9, 6 <sup>2</sup> , 3 <sup>2</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[9, 6, 2, 1]	$1T_1, 2T_1, 6T_{13}^*, 9T_{31}^*$	$18T_{951}^*$	3359232	[18, 9, 6 <sup>2</sup> , 3 <sup>2</sup> , 2 <sup>6</sup> , 1 <sup>6</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{10}^+$	$18T_{365}$	2160	[18, 15, 4, 2, 1 <sup>14</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{42}^{+*}$	$18T_{664}^+$	29160	[18, 15, 6, 3 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{43}^*$	$18T_{665}^+$	29160	[18, 15, 6, 3 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{45}^*$	$18T_{723}^+$	43740	[18, 15, 3 <sup>4</sup> , 2, 1 <sup>11</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{52}^*$	$18T_{736}$	58320	[18, 15, 12, 3 <sup>2</sup> , 2, 1 <sup>12</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{54}^{+*}$	$18T_{789}$	87480	[18, 15, 6, 3 <sup>3</sup> , 2, 1 <sup>11</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{55}^*$	$18T_{788}^+$	87480	[18, 15, 6, 3 <sup>3</sup> , 2, 1 <sup>11</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{55}^*$	$18T_{790}^+$	87480	[18, 15, 6, 3 <sup>3</sup> , 2, 1 <sup>11</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{61}^+$	$18T_{849}^+$	174960	[18, 15, 12, 9, 3, 2, 1 <sup>12</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{62}^+$	$18T_{848}$	174960	[18, 15, 12, 9, 3, 2, 1 <sup>12</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{64}^*$	$18T_{845}$	174960	[18, 15, 12, 3 <sup>3</sup> , 2, 1 <sup>11</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{64}^*$	$18T_{846}^+$	174960	[18, 15, 6, 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>10</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{70}^*$	$18T_{886}$	349920	[18, 15, 12, 9, 6, 2, 1 <sup>12</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{76}^*$	$18T_{900}^+$	524880	[18, 15, 12, 9, 3 <sup>2</sup> , 2, 1 <sup>11</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[15, 2, 1]	$1T_1, 2T_1, 15T_{77}^+$	$18T_{899}$	524880	[18, 15, 12, 9, 3 <sup>2</sup> , 2, 1 <sup>11</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{83}$	$18T_{925}$	1049760	[18, 15, 12, 9, 6, 3, 2, 1 <sup>11</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{86}^*$	$18T_{936}^+$	1399680	[18, 15, 6, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{86}^*$	$18T_{948}$	2799360	[18, 15, 6, 3 <sup>3</sup> , 2 <sup>6</sup> , 1 <sup>6</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{87}^*$	$18T_{949}^+$	2799360	[18, 15, 12, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{87}^*$	$18T_{950}$	2799360	[18, 15, 12, 3 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{87}^*$	$18T_{956}$	5598720	[18, 15, 12, 3 <sup>3</sup> , 2 <sup>6</sup> , 1 <sup>6</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{90}$	$18T_{957}^+$	8398080	[18, 15, 12, 9, 3 <sup>2</sup> , 2 <sup>5</sup> , 1 <sup>7</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{90}$	$18T_{960}$	16796160	[18, 15, 12, 9, 3 <sup>2</sup> , 2 <sup>6</sup> , 1 <sup>6</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{93}$	$18T_{959}^+$	16796160	[18, 15, 12, 9, 6, 3, 2 <sup>5</sup> , 1 <sup>7</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{93}$	$18T_{961}$	16796160	[18, 15, 12, 9, 6, 3, 2 <sup>5</sup> , 1 <sup>7</sup> ]
[15, 2, 1]	$1T_1, 2T_1, 15T_{93}$	$18T_{962}$	33592320	[18, 15, 12, 9, 6, 3, 2 <sup>6</sup> , 1 <sup>6</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_1^*)^2, 9T_9^{+*}$	$18T_{192}^*$	648	[18, 9, 4, 1 <sup>15</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_1^*)^2, 9T_9^{+*}$	$18T_{196}^*$	648	[18, 9, 4, 1 <sup>15</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_1^*)^2, 9T_9^{+*}$	$18T_{212}^*$	648	[18, 9, 4, 1 <sup>15</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_1^*)^2, 9T_9^{+*}$	$18T_{214}^*$	648	[18, 9, 4, 1 <sup>15</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_1^*)^2, 9T_9^{+*}$	$18T_{288}^*$	1296	[18, 9, 4, 2, 1 <sup>14</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_1^*)^2, 9T_9^{+*}$	$18T_{291}^*$	1296	[18, 9, 4, 2, 1 <sup>14</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_1^*)^2, 9T_9^{+*}$	$18T_{398}^*$	2592	[18, 9, 4 <sup>2</sup> , 1 <sup>14</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{290}^*$	1296	[18, 9, 4, 2, 1 <sup>14</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{292}^*$	1296	[18, 9, 4, 2, 1 <sup>14</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{304}^*$	1296	[18, 9, 4, 2, 1 <sup>14</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{307}^*$	1296	[18, 9, 4, 2, 1 <sup>14</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{379}^*$	2592	[18, 9, 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{384}^{+*}$	2592	[18, 9, 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{387}^*$	2592	[18, 9, 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{390}^*$	2592	[18, 9, 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{391}^*$	2592	[18, 9, 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{474}^*$	5184	[18, 9, 4 <sup>2</sup> , 2, 1 <sup>13</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{477}^{+*}$	5184	[18, 9, 4 <sup>2</sup> , 2, 1 <sup>13</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{481}^*$	5184	[18, 9, 4, 2 <sup>3</sup> , 1 <sup>12</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{482}^*$	5184	[18, 9, 4, 2 <sup>3</sup> , 1 <sup>12</sup> ]
[9, 4 <sup>2</sup> , 1]	$1T_1, (4T_3^*)^2, 9T_{16}^*$	$18T_{555}^*$	10368	[18, 9, 4 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>12</sup> ]
[6 <sup>2</sup> , 5, 1]	$1T_1, 5T_2^{+*}, (6T_{12}^+)^2$	$18T_{911}^+$	648000	[18, 6 <sup>2</sup> , 5 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>9</sup> ]
[6 <sup>2</sup> , 5, 1]	$1T_1, 5T_3^*, (6T_{14})^2$	$18T_{933}$	1296000	[18, 6 <sup>2</sup> , 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>9</sup> ]
[6 <sup>2</sup> , 5, 1]	$1T_1, 5T_3^*, (6T_{14})^2$	$18T_{947}^+$	2592000	[18, 6 <sup>2</sup> , 5 <sup>3</sup> , 4 <sup>2</sup> , 2, 1 <sup>9</sup> ]
[6 <sup>2</sup> , 5, 1]	$1T_1, 5T_3^*, (6T_{14})^2$	$18T_{953}$	5184000	[18, 6 <sup>2</sup> , 5 <sup>3</sup> , 4 <sup>3</sup> , 1 <sup>9</sup> ]
[6 <sup>2</sup> , 5, 1]	$1T_1, 5T_4^+, (6T_{15}^+)^2$	$18T_{967}^+$	139968000	[18, 6 <sup>2</sup> , 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 1 <sup>6</sup> ]
[6 <sup>2</sup> , 5, 1]	$1T_1, 5T_5, (6T_{16})^2$	$18T_{969}$	279936000	[18, 6 <sup>2</sup> , 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2, 1 <sup>5</sup> ]
[6 <sup>2</sup> , 5, 1]	$1T_1, 5T_5, (6T_{16})^2$	$18T_{973}^+$	559872000	[18, 6 <sup>2</sup> , 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>4</sup> ]
[6 <sup>2</sup> , 5, 1]	$1T_1, 5T_5, (6T_{16})^2$	$18T_{974}$	1119744000	[18, 6 <sup>2</sup> , 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>3</sup> ]
[12, 5, 1]	$1T_1, 5T_2^{+*}, 12T_{269}^+$	$18T_{934}^+$	1296000	[18, 12, 6, 5 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>9</sup> ]
[12, 5, 1]	$1T_1, 5T_3^*, 12T_{269}^+$	$18T_{935}$	1296000	[18, 6 <sup>2</sup> , 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>9</sup> ]
[12, 5, 1]	$1T_1, 5T_3^*, 12T_{279}$	$18T_{946}$	2592000	[18, 12, 6, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>9</sup> ]
[12, 5, 1]	$1T_1, 5T_3^*, 12T_{288}$	$18T_{954}$	5184000	[18, 12, 6, 5 <sup>3</sup> , 4 <sup>2</sup> , 2, 1 <sup>9</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[12, 5, 1]	$1T_1, 5T_3^*, 12T_{288}$	$18T_{955}^+$	5184000	[18, 12, 6, 5 <sup>3</sup> , 4 <sup>2</sup> , 2, 1 <sup>9</sup> ]
[12, 5, 1]	$1T_1, 5T_3^*, 12T_{288}$	$18T_{958}^+$	10368000	[18, 12, 6, 5 <sup>3</sup> , 4 <sup>3</sup> , 1 <sup>9</sup> ]
[12, 5, 1]	$1T_1, 5T_4^+, 12T_{296}^+$	$18T_{971}^+$	279936000	[18, 12, 6, 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 1 <sup>6</sup> ]
[12, 5, 1]	$1T_1, 5T_5, 12T_{296}^+$	$18T_{970}^+$	279936000	[18, 6 <sup>2</sup> , 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2, 1 <sup>5</sup> ]
[12, 5, 1]	$1T_1, 5T_5, 12T_{297}^+$	$18T_{972}^+$	559872000	[18, 12, 6, 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2, 1 <sup>5</sup> ]
[12, 5, 1]	$1T_1, 5T_5, 12T_{299}$	$18T_{975}^+$	1119744000	[18, 12, 6, 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>4</sup> ]
[12, 5, 1]	$1T_1, 5T_5, 12T_{299}$	$18T_{976}^+$	1119744000	[18, 12, 6, 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>4</sup> ]
[12, 5, 1]	$1T_1, 5T_5, 12T_{299}$	$18T_{977}^+$	2239488000	[18, 12, 6, 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>3</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{280}^{+*}$	1296	[18, 9, 8, 1 <sup>15</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{281}^*$	1296	[18, 9, 8, 1 <sup>15</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{297}^*$	1296	[18, 9, 8, 1 <sup>15</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{298}^*$	1296	[18, 9, 8, 1 <sup>15</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{302}^*$	1296	[18, 9, 8, 1 <sup>15</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{309}^*$	1296	[18, 9, 8, 1 <sup>15</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{378}^{+*}$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{381}^*$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{382}^*$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{389}^*$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{469}^*$	5184	[18, 9, 8, 4, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{470}^{+*}$	5184	[18, 9, 8, 4, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_1^*, 9T_{15}^*$	$18T_{553}^*$	10368	[18, 9, 8 <sup>2</sup> , 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_5^{+*}, 9T_{14}^{+*}$	$18T_{293}^*$	1296	[18, 9, 8, 1 <sup>15</sup> ]
[9, 8, 1]	$1T_1, 8T_5^{+*}, 9T_{14}^{+*}$	$18T_{294}^*$	1296	[18, 9, 8, 1 <sup>15</sup> ]
[9, 8, 1]	$1T_1, 8T_5^{+*}, 9T_{14}^{+*}$	$18T_{306}^*$	1296	[18, 9, 8, 1 <sup>15</sup> ]
[9, 8, 1]	$1T_1, 8T_5^{+*}, 9T_{14}^{+*}$	$18T_{318}^*$	1296	[18, 9, 8, 1 <sup>15</sup> ]
[9, 8, 1]	$1T_1, 8T_5^{+*}, 9T_{14}^{+*}$	$18T_{380}^*$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_5^{+*}, 9T_{14}^{+*}$	$18T_{392}^*$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_5^{+*}, 9T_{14}^{+*}$	$18T_{395}^*$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_5^{+*}, 9T_{14}^{+*}$	$18T_{479}^*$	5184	[18, 9, 8, 4, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_5^{+*}, 9T_{14}^{+*}$	$18T_{480}^*$	5184	[18, 9, 8, 4, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_5^{+*}, 9T_{14}^{+*}$	$18T_{560}^*$	10368	[18, 9, 8 <sup>2</sup> , 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{383}^*$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{385}^*$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{386}^*$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{393}^*$	2592	[18, 9, 8, 2, 1 <sup>14</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{471}^*$	5184	[18, 9, 8, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{475}^*$	5184	[18, 9, 8, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{476}^*$	5184	[18, 9, 8, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{478}^*$	5184	[18, 9, 8, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{554}^*$	10368	[18, 9, 8, 4, 2, 1 <sup>13</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{557}^*$	10368	[18, 9, 8, 4, 2, 1 <sup>13</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{558}^*$	10368	[18, 9, 8, 4, 2, 1 <sup>13</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{559}^{+*}$	10368	[18, 9, 8, 4, 2, 1 <sup>13</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{561}^*$	10368	[18, 9, 8, 4, 2, 1 <sup>13</sup> ]
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{562}^{+*}$	10368	[18, 9, 8, 4, 2, 1 <sup>13</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 18

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{563}^*$	10368	$[18, 9, 8, 4, 2, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{634}^*$	20736	$[18, 9, 8^2, 2, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{635}^*$	20736	$[18, 9, 8^2, 2, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{636}^*$	20736	$[18, 9, 8^2, 2, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{637}^{+*}$	20736	$[18, 9, 8^2, 2, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{638}^*$	20736	$[18, 9, 8, 4, 2^2, 1^{12}]$
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{639}^*$	20736	$[18, 9, 8, 4, 2^2, 1^{12}]$
[9, 8, 1]	$1T_1, 8T_8^*, 9T_{19}^*$	$18T_{697}^*$	41472	$[18, 9, 8^2, 2^2, 1^{12}]$
[9, 8, 1]	$1T_1, 8T_{12}^{+*}, 9T_{23}^{+*}$	$18T_{442}^*$	3888	$[18, 9, 8, 3, 1^{14}]$
[9, 8, 1]	$1T_1, 8T_{12}^{+*}, 9T_{23}^{+*}$	$18T_{443}^*$	3888	$[18, 9, 8, 3, 1^{14}]$
[9, 8, 1]	$1T_1, 8T_{12}^{+*}, 9T_{23}^{+*}$	$18T_{450}^*$	3888	$[18, 9, 8, 3, 1^{14}]$
[9, 8, 1]	$1T_1, 8T_{12}^{+*}, 9T_{23}^{+*}$	$18T_{451}^*$	3888	$[18, 9, 8, 3, 1^{14}]$
[9, 8, 1]	$1T_1, 8T_{12}^{+*}, 9T_{23}^{+*}$	$18T_{522}^*$	7776	$[18, 9, 8, 3, 2, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_{12}^{+*}, 9T_{23}^{+*}$	$18T_{525}^*$	7776	$[18, 9, 8, 3, 2, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_{12}^{+*}, 9T_{23}^{+*}$	$18T_{667}^*$	31104	$[18, 9, 8^2, 3, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_{12}^{+*}, 9T_{23}^{+*}$	$18T_{668}^*$	31104	$[18, 9, 8^2, 3, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_{12}^{+*}, 9T_{23}^{+*}$	$18T_{792}^*$	93312	$[18, 9, 8^2, 3^2, 1^{12}]$
[9, 8, 1]	$1T_1, 8T_{23}^*, 9T_{26}^*$	$18T_{524}^*$	7776	$[18, 9, 8, 6, 1^{14}]$
[9, 8, 1]	$1T_1, 8T_{23}^*, 9T_{26}^*$	$18T_{526}^*$	7776	$[18, 9, 8, 6, 1^{14}]$
[9, 8, 1]	$1T_1, 8T_{23}^*, 9T_{26}^*$	$18T_{527}^*$	7776	$[18, 9, 8, 6, 1^{14}]$
[9, 8, 1]	$1T_1, 8T_{23}^*, 9T_{26}^*$	$18T_{528}^*$	7776	$[18, 9, 8, 6, 1^{14}]$
[9, 8, 1]	$1T_1, 8T_{23}^*, 9T_{26}^*$	$18T_{597}^*$	15552	$[18, 9, 8, 6, 2, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_{23}^*, 9T_{26}^*$	$18T_{737}^*$	62208	$[18, 9, 8^2, 6, 1^{13}]$
[9, 8, 1]	$1T_1, 8T_{23}^*, 9T_{26}^*$	$18T_{850}^*$	186624	$[18, 9, 8^2, 6, 3, 1^{12}]$
[9, 8, 1]	$1T_1, 8T_{23}^*, 9T_{26}^*$	$18T_{851}^{+*}$	186624	$[18, 9, 8^2, 6, 3, 1^{12}]$
[9, 8, 1]	$1T_1, 8T_{23}^*, 9T_{26}^*$	$18T_{889}^*$	373248	$[18, 9, 8^2, 6^2, 1^{12}]$
[9, 8, 1]	$1T_1, 8T_{25}^{+*}, 9T_{27}^+$	$18T_{897}^*$	508032	$[18, 9, 8^2, 7^2, 1^{12}]$
[9, 8, 1]	$1T_1, 8T_{36}^{+*}, 9T_{32}^+$	$18T_{937}^*$	1524096	$[18, 9, 8^2, 7^2, 3, 1^{11}]$
[9, 8, 1]	$1T_1, 8T_{36}^{+*}, 9T_{32}^+$	$18T_{938}^*$	1524096	$[18, 9, 8^2, 7^2, 3, 1^{11}]$
[9, 8, 1]	$1T_1, 8T_{36}^{+*}, 9T_{32}^+$	$18T_{952}^*$	4572288	$[18, 9, 8^2, 7^2, 3^2, 1^{10}]$
[9, 8, 1]	$1T_1, 8T_{49}^+, 9T_{33}^+$	$18T_{978}^*$	65840947200	$[18, 9, 8^2, 7^2, \dots, 3^2, 1^4]$
[9, 8, 1]	$1T_1, 8T_{50}^+, 9T_{34}^+$	$18T_{979}^+$	131681894400	$[18, 9, 8^2, 7^2, \dots, 3^2, 2, 1^3]$
[9, 8, 1]	$1T_1, 8T_{50}^+, 9T_{34}^+$	$18T_{980}^+$	131681894400	$[18, 9, 8^2, 7^2, \dots, 3^2, 2, 1^3]$
[9, 8, 1]	$1T_1, 8T_{50}^+, 9T_{34}^+$	$18T_{981}^+$	263363788800	$[18, 9, 8^2, 7^2, \dots, 3^2, 2^2, 1^2]$
[17, 1]	$1T_1, 17T_4^{+*}$	$18T_{377}^+$	2448	$[18, 17, 8, 1^{15}]$
[17, 1]	$1T_1, 17T_5^*$	$18T_{468}^*$	4896	$[18, 17, 16, 1^{15}]$
[17, 1]	$1T_1, 17T_9^+$	$18T_{982}^+$	$18! / 2$	$[18, \dots, 3, 1^2]$
[17, 1]	$1T_1, 17T_{10}$	$18T_{983}^*$	$18!$	$[18, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 19

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{19}]$	$(1T_1)^{19}$	$19T_1^{+*}$	19	$[19, 1^{18}]$
$[2^9, 1]$	$1T_1, (2T_1)^9$	$19T_2^*$	38	$[19, 2, 1^{17}]$
$[3^6, 1]$	$1T_1, (3T_1^{+*})^6$	$19T_3^{+*}$	57	$[19, 3, 1^{17}]$
$[6^3, 1]$	$1T_1, (6T_1^*)^3$	$19T_4^*$	114	$[19, 6, 1^{17}]$
$[9^2, 1]$	$1T_1, (9T_1^{+*})^2$	$19T_5^{+*}$	171	$[19, 9, 1^{17}]$
$[18, 1]$	$1T_1, 18T_1^*$	$19T_6^*$	342	$[19, 18, 1^{17}]$
$[18, 1]$	$1T_1, 18T_{982}^+$	$19T_7^+$	$19!/2$	$[19, \dots, 3, 1^2]$
$[18, 1]$	$1T_1, 18T_{983}$	$19T_8$	$19!$	$[19, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{20}]$	$(1T_1)^{20}$	$20T_1^*$	20	$[20, 1^{19}]$
$[1^{20}]$	$(1T_1)^{20}$	$20T_2^*$	20	$[20, 1^{19}]$
$[1^{20}]$	$(1T_1)^{20}$	$20T_3^{+*}$	20	$[20, 1^{19}]$
$[1^{20}]$	$(1T_1)^{20}$	$20T_4^{+*}$	20	$[20, 1^{19}]$
$[1^{20}]$	$(1T_1)^{20}$	$20T_5^*$	20	$[20, 1^{19}]$
$[2^5, 1^{10}]$	$(1T_1)^{10}, (2T_1)^5$	$20T_{11}^*$	40	$[20, 2, 1^{18}]$
$[2^5, 1^{10}]$	$(1T_1)^{10}, (2T_1)^5$	$20T_{12}^*$	40	$[20, 2, 1^{18}]$
$[5^2, 1^{10}]$	$(1T_1)^{10}, (5T_1^{+*})^2$	$20T_{24}^{+*}$	100	$[20, 5, 1^{18}]$
$[5^2, 1^{10}]$	$(1T_1)^{10}, (5T_1^{+*})^2$	$20T_{25}^*$	100	$[20, 5, 1^{18}]$
$[5^2, 1^{10}]$	$(1T_1)^{10}, (5T_1^{+*})^2$	$20T_{27}^*$	100	$[20, 5, 1^{18}]$
$[5^2, 1^{10}]$	$(1T_1)^{10}, (5T_1^{+*})^2$	$20T_{28}^{+*}$	100	$[20, 5, 1^{18}]$
$[10, 1^{10}]$	$(1T_1)^{10}, 10T_1^*$	$20T_{53}^*$	200	$[20, 10, 1^{18}]$
$[10, 1^{10}]$	$(1T_1)^{10}, 10T_2^*$	$20T_{48}^*$	200	$[20, 10, 1^{18}]$
$[3^5, 1^5]$	$(1T_1)^5, (3T_1^{+*})^5$	$20T_{14}^{+*}$	60	$[20, 3, 1^{18}]$
$[3^5, 1^5]$	$(1T_1)^5, (3T_2^*)^5$	$20T_{34}^*$	120	$[20, 3, 2, 1^{17}]$
$[5^3, 1^5]$	$(1T_1)^5, (5T_1^{+*})^3$	$20T_{26}^*$	100	$[20, 5, 1^{18}]$
$[5^3, 1^5]$	$(1T_1)^5, (5T_1^{+*})^3$	$20T_{29}^*$	100	$[20, 5, 1^{18}]$
$[5^3, 1^5]$	$(1T_1)^5, (5T_1^{+*})^3$	$20T_{124}^{+*}$	500	$[20, 5^2, 1^{17}]$
$[5^3, 1^5]$	$(1T_1)^5, (5T_1^{+*})^3$	$20T_{125}^*$	500	$[20, 5^2, 1^{17}]$
$[5^3, 1^5]$	$(1T_1)^5, (5T_1^{+*})^3$	$20T_{126}^*$	500	$[20, 5^2, 1^{17}]$
$[5^3, 1^5]$	$(1T_1)^5, (5T_1^{+*})^3$	$20T_{127}^*$	500	$[20, 5^2, 1^{17}]$
$[5^3, 1^5]$	$(1T_1)^5, (5T_1^{+*})^3$	$20T_{128}^{+*}$	500	$[20, 5^2, 1^{17}]$
$[5^3, 1^5]$	$(1T_1)^5, (5T_1^{+*})^3$	$20T_{237}^*$	2500	$[20, 5^3, 1^{16}]$
$[5^3, 1^5]$	$(1T_1)^5, (5T_1^{+*})^3$	$20T_{238}^{+*}$	2500	$[20, 5^3, 1^{16}]$
$[10, 5, 1^5]$	$(1T_1)^5, 5T_1^{+*}, 10T_6^*$	$20T_{181}^*$	1000	$[20, 10, 5, 1^{17}]$
$[10, 5, 1^5]$	$(1T_1)^5, 5T_1^{+*}, 10T_6^*$	$20T_{185}^*$	1000	$[20, 10, 5, 1^{17}]$
$[10, 5, 1^5]$	$(1T_1)^5, 5T_1^{+*}, 10T_6^*$	$20T_{299}^*$	5000	$[20, 10, 5^2, 1^{16}]$
$[15, 1^5]$	$(1T_1)^5, 15T_9^{+*}$	$20T_{209}^{+*}$	1500	$[20, 15, 5, 1^{17}]$
$[15, 1^5]$	$(1T_1)^5, 15T_{13}^*$	$20T_{268}^*$	3000	$[20, 15, 10, 1^{17}]$
$[15, 1^5]$	$(1T_1)^5, 15T_{25}^{+*}$	$20T_{364}^{+*}$	7500	$[20, 15, 5^2, 1^{16}]$
$[15, 1^5]$	$(1T_1)^5, 15T_{32}^*$	$20T_{462}^*$	15000	$[20, 15, 10, 5, 1^{16}]$
$[2^8, 1^4]$	$(1T_1)^4, (2T_1)^8$	$20T_6^*$	40	$[20, 2, 1^{18}]$
$[2^8, 1^4]$	$(1T_1)^4, (2T_1)^8$	$20T_8^{+*}$	40	$[20, 2, 1^{18}]$
$[2^8, 1^4]$	$(1T_1)^4, (2T_1)^8$	$20T_9^*$	40	$[20, 2, 1^{18}]$
$[2^8, 1^4]$	$(1T_1)^4, (2T_1)^8$	$20T_{13}^{+*}$	40	$[20, 2, 1^{18}]$
$[2^8, 1^4]$	$(1T_1)^4, (2T_1)^8$	$20T_{43}^{+*}$	160	$[20, 2^3, 1^{16}]$
$[2^8, 1^4]$	$(1T_1)^4, (2T_1)^8$	$20T_{44}^{+*}$	160	$[20, 2^3, 1^{16}]$
$[2^8, 1^4]$	$(1T_1)^4, (2T_1)^8$	$20T_{75}^*$	320	$[20, 2^4, 1^{15}]$
$[2^8, 1^4]$	$(1T_1)^4, (2T_1)^8$	$20T_{81}^{+*}$	320	$[20, 2^4, 1^{15}]$
$[2^8, 1^4]$	$(1T_1)^4, (2T_1)^8$	$20T_{84}^*$	320	$[20, 2^4, 1^{15}]$
$[2^8, 1^4]$	$(1T_1)^4, (2T_1)^8$	$20T_{86}^{+*}$	320	$[20, 2^4, 1^{15}]$
$[4^2, 2^4, 1^4]$	$(1T_1)^4, (2T_1)^4, (4T_2^{+*})^2$	$20T_{17}^{+*}$	80	$[20, 2^2, 1^{17}]$
$[4^2, 2^4, 1^4]$	$(1T_1)^4, (2T_1)^4, (4T_2^{+*})^2$	$20T_{41}^{+*}$	160	$[20, 2^3, 1^{16}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_1^*)^4$	$20T_{16}^{+*}$	80	$[20, 4, 1^{18}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_1^*)^4$	$20T_{20}^*$	80	$[20, 4, 1^{18}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^4, 1^4]$	$(1T_1)^4, (4T_1^*)^4$	$20T_{193}^{+*}$	1280	$[20, 4^3, 1^{16}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_1^*)^4$	$20T_{250}^{+*}$	2560	$[20, 4^3, 2, 1^{15}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_1^*)^4$	$20T_{335}^{+*}$	5120	$[20, 4^4, 1^{15}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_2^{+*})^4$	$20T_{23}^{+*}$	80	$[20, 4, 1^{18}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_2^{+*})^4$	$20T_{40}^{+*}$	160	$[20, 4, 2, 1^{17}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_2^{+*})^4$	$20T_{46}^{+*}$	160	$[20, 4, 2, 1^{17}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_2^{+*})^4$	$20T_{72}^{+*}$	320	$[20, 4^2, 1^{17}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_2^{+*})^4$	$20T_{74}^{+*}$	320	$[20, 4, 2^2, 1^{16}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_2^{+*})^4$	$20T_{190}^{+*}$	1280	$[20, 4^3, 1^{16}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_2^{+*})^4$	$20T_{263}^{+*}$	2560	$[20, 4^3, 2, 1^{15}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_2^{+*})^4$	$20T_{341}^{+*}$	5120	$[20, 4^4, 1^{15}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_3^*)^4$	$20T_{71}^{+*}$	320	$[20, 4, 2^2, 1^{16}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_3^*)^4$	$20T_{73}^{+*}$	320	$[20, 4, 2^2, 1^{16}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_3^*)^4$	$20T_{79}^{+*}$	320	$[20, 4, 2^2, 1^{16}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_3^*)^4$	$20T_{88}^*$	320	$[20, 4, 2^2, 1^{16}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_3^*)^4$	$20T_{135}^*$	640	$[20, 4, 2^3, 1^{15}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_3^*)^4$	$20T_{140}^{+*}$	640	$[20, 4, 2^3, 1^{15}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_3^*)^4$	$20T_{141}^{+*}$	640	$[20, 4, 2^3, 1^{15}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_3^*)^4$	$20T_{144}^*$	640	$[20, 4, 2^3, 1^{15}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_4^{+*})^4$	$20T_{63}$	240	$[20, 4, 3, 1^{17}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_4^{+*})^4$	$20T_{64}^+$	240	$[20, 4, 3, 1^{17}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_4^{+*})^4$	$20T_{66}$	240	$[20, 4, 3, 1^{17}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_4^{+*})^4$	$20T_{70}^+$	240	$[20, 4, 3, 1^{17}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_5^*)^4$	$20T_{117}^+$	480	$[20, 4, 3, 2, 1^{16}]$
$[4^4, 1^4]$	$(1T_1)^4, (4T_5^*)^4$	$20T_{123}$	480	$[20, 4, 3, 2, 1^{16}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_2^{+*})^2$	$20T_{45}^{+*}$	160	$[20, 8, 1^{18}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_3^{+*})^2$	$20T_{39}^{+*}$	160	$[20, 8, 1^{18}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_9^{+*})^2$	$20T_{85}^{+*}$	320	$[20, 8, 2, 1^{17}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{10}^{+*})^2$	$20T_{76}^{+*}$	320	$[20, 8, 2, 1^{17}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{16}^*)^2$	$20T_{131}^{+*}$	640	$[20, 8, 2^2, 1^{16}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{17}^*)^2$	$20T_{246}^{+*}$	2560	$[20, 8, 4^2, 1^{16}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{17}^*)^2$	$20T_{249}^{+*}$	2560	$[20, 8, 4^2, 1^{16}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{17}^*)^2$	$20T_{313}^{+*}$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{17}^*)^2$	$20T_{318}^*$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{17}^*)^2$	$20T_{418}^*$	10240	$[20, 8, 4^3, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{18}^{+*})^2$	$20T_{143}^{+*}$	640	$[20, 8, 4, 1^{17}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{18}^{+*})^2$	$20T_{240}^{+*}$	2560	$[20, 8, 4^2, 1^{16}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{18}^{+*})^2$	$20T_{260}^{+*}$	2560	$[20, 8, 4^2, 1^{16}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{18}^{+*})^2$	$20T_{322}^{+*}$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{18}^{+*})^2$	$20T_{348}^{+*}$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{18}^{+*})^2$	$20T_{412}^{+*}$	10240	$[20, 8, 4^3, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{20}^{+*})^2$	$20T_{137}^{+*}$	640	$[20, 8, 2^2, 1^{16}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{27}^*)^2$	$20T_{186}^*$	1280	$[20, 8, 2^3, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{27}^*)^2$	$20T_{196}^{+*}$	1280	$[20, 8, 2^3, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{32}^{+*})^2$	$20T_{226}^+$	1920	$[20, 8, 6, 2, 1^{16}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{32}^{+*})^2$	$20T_{230}^+$	1920	$[20, 8, 6, 2, 1^{16}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{38}^*)^2$	$20T_{275}^+$	3840	$[20, 8, 6, 2^2, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{38}^*)^2$	$20T_{277}^+$	3840	$[20, 8, 6, 2^2, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{38}^*)^2$	$20T_{283}^+$	3840	$[20, 8, 6, 2^2, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{38}^*)^2$	$20T_{290}^+$	3840	$[20, 8, 6, 2^2, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{39}^{+*})^2$	$20T_{279}^+$	3840	$[20, 8, 6, 4, 1^{16}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{40}^*)^2$	$20T_{288}^+$	3840	$[20, 8, 6, 4, 1^{16}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{44}^*)^2$	$20T_{368}^+$	7680	$[20, 8, 6, 4, 2, 1^{15}]$
$[8^2, 1^4]$	$(1T_1)^4, (8T_{44}^*)^2$	$20T_{369}^+$	7680	$[20, 8, 6, 4, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{533}^{+*}$	$20T_{306}^{+*}$	5120	$[20, 16, 4^2, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{551}^*$	$20T_{332}^*$	5120	$[20, 16, 4^2, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{563}^{+*}$	$20T_{305}^{+*}$	5120	$[20, 16, 4^2, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{564}^{+*}$	$20T_{351}^{+*}$	5120	$[20, 16, 4^2, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{581}^{+*}$	$20T_{330}^{+*}$	5120	$[20, 16, 4^2, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{888}^*$	$20T_{443}^*$	10240	$[20, 16, 4^2, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{898}^{+*}$	$20T_{434}^{+*}$	10240	$[20, 16, 4^2, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{911}^{+*}$	$20T_{422}^{+*}$	10240	$[20, 16, 4^2, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{925}^{+*}$	$20T_{406}^{+*}$	10240	$[20, 16, 4^2, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1071}^{+*}$	$20T_{468}^+$	15360	$[20, 16, 12, 4, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1072}^{+*}$	$20T_{467}^+$	15360	$[20, 16, 12, 4, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1192}^*$	$20T_{519}^*$	20480	$[20, 16, 4^3, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1224}^{+*}$	$20T_{528}^{+*}$	20480	$[20, 16, 4^3, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1305}^{+*}$	$20T_{561}^+$	30720	$[20, 16, 12, 4, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1308}^{+*}$	$20T_{565}^+$	30720	$[20, 16, 12, 4, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1320}^{+*}$	$20T_{573}^+$	30720	$[20, 16, 12, 8, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1322}^{+*}$	$20T_{567}^+$	30720	$[20, 16, 12, 8, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1324}^{+*}$	$20T_{555}^+$	30720	$[20, 16, 12, 8, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1325}^{+*}$	$20T_{568}^+$	30720	$[20, 16, 12, 8, 1^{16}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1515}^{+*}$	$20T_{689}^+$	61440	$[20, 16, 12, 4^2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1517}^*$	$20T_{677}^*$	61440	$[20, 16, 12, 4^2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1520}^{+*}$	$20T_{673}^+$	61440	$[20, 16, 12, 8, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1536}^*$	$20T_{671}^*$	61440	$[20, 16, 12, 8, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1537}^{+*}$	$20T_{664}^+$	61440	$[20, 16, 12, 8, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1538}^{+*}$	$20T_{669}^+$	61440	$[20, 16, 12, 8, 2, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1660}^*$	$20T_{791}^*$	122880	$[20, 16, 12, 8, 4, 1^{15}]$
$[16, 1^4]$	$(1T_1)^4, 16T_{1664}^{+*}$	$20T_{799}^+$	122880	$[20, 16, 12, 8, 4, 1^{15}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_7^*$	40	$[20, 2, 1^{18}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{10}^*$	40	$[20, 2, 1^{18}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{130}^*$	640	$[20, 2^5, 1^{14}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{139}^*$	640	$[20, 2^5, 1^{14}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{255}^{+*}$	2560	$[20, 2^7, 1^{12}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{262}^{+*}$	2560	$[20, 2^7, 1^{12}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{340}^{+*}$	5120	$[20, 2^8, 1^{11}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{344}^*$	5120	$[20, 2^8, 1^{11}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{347}^{+*}$	5120	$[20, 2^8, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees



## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{350}^*$	5120	$[20, 2^8, 1^{11}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{409}^*$	10240	$[20, 2^9, 1^{10}]$
$[2^9, 1^2]$	$(1T_1)^2, (2T_1)^9$	$20T_{423}^*$	10240	$[20, 2^9, 1^{10}]$
$[4^2, 2^5, 1^2]$	$(1T_1)^2, (2T_1)^5, (4T_2^{+*})^2$	$20T_{21}^*$	80	$[20, 2^2, 1^{17}]$
$[4^2, 2^5, 1^2]$	$(1T_1)^2, (2T_1)^5, (4T_2^{+*})^2$	$20T_{22}^*$	80	$[20, 2^2, 1^{17}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{47}^{+*}$	200	$[20, 5, 2, 1^{17}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{49}^*$	200	$[20, 5, 2, 1^{17}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{50}^{+*}$	200	$[20, 5, 2, 1^{17}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{52}^{+*}$	200	$[20, 5, 2, 1^{17}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{54}^{+*}$	200	$[20, 5, 2, 1^{17}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{55}^{+*}$	200	$[20, 5, 2, 1^{17}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{56}^*$	200	$[20, 5, 2, 1^{17}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{58}^*$	200	$[20, 5, 2, 1^{17}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{59}^{+*}$	200	$[20, 5, 2, 1^{17}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{93}^*$	400	$[20, 5, 2^2, 1^{16}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{96}^{+*}$	400	$[20, 5, 2^2, 1^{16}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{100}^{+*}$	400	$[20, 5, 2^2, 1^{16}]$
$[5^2, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, (5T_2^{+*})^2$	$20T_{109}^*$	400	$[20, 5, 2^2, 1^{16}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_1^*$	$20T_{57}^*$	200	$[20, 10, 1^{18}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_2^*$	$20T_{60}^*$	200	$[20, 10, 1^{18}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_3^*$	$20T_{92}^*$	400	$[20, 10, 2, 1^{17}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_3^*$	$20T_{94}^*$	400	$[20, 10, 2, 1^{17}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_3^*$	$20T_{103}^*$	400	$[20, 10, 2, 1^{17}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_3^*$	$20T_{106}^*$	400	$[20, 10, 2, 1^{17}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_3^*$	$20T_{168}^*$	800	$[20, 10, 2^2, 1^{16}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_4^*$	$20T_{167}^*$	800	$[20, 10, 2^2, 1^{16}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_8^{+*}$	$20T_{455}^{+*}$	12800	$[20, 10, 2^6, 1^{12}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_{14}^*$	$20T_{534}^*$	25600	$[20, 10, 2^7, 1^{11}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_{14}^*$	$20T_{538}^{+*}$	25600	$[20, 10, 2^7, 1^{11}]$
$[10, 2^4, 1^2]$	$(1T_1)^2, (2T_1)^4, 10T_{14}^*$	$20T_{647}^*$	51200	$[20, 10, 2^8, 1^{10}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_1^*)^4$	$20T_{18}^*$	80	$[20, 4, 1^{18}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_1^*)^4$	$20T_{19}^*$	80	$[20, 4, 1^{18}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^3$	$20T_{78}^*$	320	$[20, 4, 2^2, 1^{16}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^3$	$20T_{239}^{+*}$	2560	$[20, 4, 2^5, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_1^*, (4T_3^*)^3$	$20T_{311}^{+*}$	5120	$[20, 4^2, 2^4, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^3$	$20T_{83}^{+*}$	320	$[20, 4, 2^2, 1^{16}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^3$	$20T_{245}^{+*}$	2560	$[20, 4, 2^5, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, 4T_2^{+*}, (4T_3^*)^3$	$20T_{303}^*$	5120	$[20, 4, 2^6, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{133}^*$	640	$[20, 4, 2^3, 1^{15}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{134}^{+*}$	640	$[20, 4, 2^3, 1^{15}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{138}^*$	640	$[20, 2^5, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{142}^*$	640	$[20, 2^5, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{187}^*$	1280	$[20, 4, 2^4, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{188}^{+*}$	1280	$[20, 4, 2^4, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{191}^*$	1280	$[20, 4, 2^4, 1^{14}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{192}^*$	1280	$[20, 4, 2^4, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{247}^{+*}$	2560	$[20, 4, 2^5, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{251}^*$	2560	$[20, 4^2, 2^3, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{253}^{+*}$	2560	$[20, 4, 2^5, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{254}^{+*}$	2560	$[20, 4, 2^5, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{256}^*$	2560	$[20, 4^3, 2, 1^{15}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{257}^{+*}$	2560	$[20, 4^3, 2, 1^{15}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{259}^*$	2560	$[20, 4^3, 2, 1^{15}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{304}^{+*}$	5120	$[20, 4^3, 2^2, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{308}^*$	5120	$[20, 4, 2^6, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{310}^*$	5120	$[20, 4^2, 2^4, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{314}^{+*}$	5120	$[20, 4, 2^6, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{315}^{+*}$	5120	$[20, 4^2, 2^4, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{316}^{+*}$	5120	$[20, 4, 2^6, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{321}^*$	5120	$[20, 4, 2^6, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{323}^*$	5120	$[20, 4^2, 2^4, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{326}^*$	5120	$[20, 4^3, 2^2, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{328}^{+*}$	5120	$[20, 4, 2^6, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{329}^*$	5120	$[20, 4^3, 2^2, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{331}^{+*}$	5120	$[20, 4^2, 2^4, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{333}^*$	5120	$[20, 4^3, 2^2, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{336}^*$	5120	$[20, 4^2, 2^4, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{337}^*$	5120	$[20, 4^3, 2^2, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{343}^{+*}$	5120	$[20, 4, 2^6, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{345}^*$	5120	$[20, 4, 2^6, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{353}^*$	5120	$[20, 4^2, 2^4, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{407}^*$	10240	$[20, 4^2, 2^5, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{410}^*$	10240	$[20, 4^3, 2^3, 1^{13}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{415}^*$	10240	$[20, 4^2, 2^5, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{421}^*$	10240	$[20, 4, 2^7, 1^{11}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{426}^*$	10240	$[20, 4, 2^7, 1^{11}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{427}^*$	10240	$[20, 4^4, 2, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{428}^*$	10240	$[20, 4, 2^7, 1^{11}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{429}^{+*}$	10240	$[20, 4, 2^7, 1^{11}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{430}^{+*}$	10240	$[20, 4, 2^7, 1^{11}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{432}^*$	10240	$[20, 4^4, 2, 1^{14}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{433}^*$	10240	$[20, 4^2, 2^5, 1^{12}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{440}^*$	10240	$[20, 4, 2^7, 1^{11}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{513}^*$	20480	$[20, 4, 2^8, 1^{10}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{525}^*$	20480	$[20, 4, 2^8, 1^{10}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{631}^{+*}$	40960	$[20, 4^3, 2^5, 1^{11}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{747}^*$	81920	$[20, 4^4, 2^4, 1^{11}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{749}^*$	81920	$[20, 4^3, 2^6, 1^{10}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{751}^{+*}$	81920	$[20, 4^4, 2^4, 1^{11}]$
$[4^4, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^4$	$20T_{846}^*$	163840	$[20, 4^4, 2^5, 1^{10}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees





## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_1^*)^2, 8T_2^{+*}$	$20T_{42}^*$	160	$[20, 4, 2, 1^{17}]$
$[8, 4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2, 8T_4^{+*}$	$20T_{38}^*$	160	$[20, 8, 1^{18}]$
$[8, 4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2, 8T_9^{+*}$	$20T_{87}^*$	320	$[20, 8, 2, 1^{17}]$
$[8, 4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_3^*)^2, 8T_{10}^{+*}$	$20T_{82}^*$	320	$[20, 4, 2^2, 1^{16}]$
$[8, 4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_4^{+*})^2, 8T_{13}^{+*}$	$20T_{116}$	480	$[20, 4, 3, 2, 1^{16}]$
$[8, 4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_4^{+*})^2, 8T_{13}^{+*}$	$20T_{119}$	480	$[20, 4, 3, 2, 1^{16}]$
$[8, 4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_5^*)^2, 8T_{14}^{+*}$	$20T_{118}$	480	$[20, 8, 3, 1^{17}]$
$[8, 4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_5^*)^2, 8T_{14}^{+*}$	$20T_{120}$	480	$[20, 8, 3, 1^{17}]$
$[8, 4^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (4T_5^*)^2, 8T_{24}^{+*}$	$20T_{174}$	960	$[20, 4, 3, 2^2, 1^{15}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_9^{+*}, 8T_{18}^{+*}$	$20T_{136}^*$	640	$[20, 8, 4, 1^{17}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{16}^*, 8T_{27}^*$	$20T_{420}^{+*}$	10240	$[20, 8, 2^6, 1^{12}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{17}^*)^2$	$20T_{244}^*$	2560	$[20, 4^3, 2, 1^{15}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{17}^*)^2$	$20T_{258}^{+*}$	2560	$[20, 4^3, 2, 1^{15}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{17}^*)^2$	$20T_{319}^*$	5120	$[20, 4^3, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{17}^*)^2$	$20T_{327}^{+*}$	5120	$[20, 4^3, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{17}^*)^2$	$20T_{424}^*$	10240	$[20, 4^4, 2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{18}^{+*})^2$	$20T_{243}^*$	2560	$[20, 4^3, 2, 1^{15}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{18}^{+*})^2$	$20T_{307}^*$	5120	$[20, 4^3, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{18}^{+*})^2$	$20T_{334}^*$	5120	$[20, 4^3, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{18}^{+*})^2$	$20T_{408}^*$	10240	$[20, 4^4, 2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{20}^{+*}, 8T_{27}^*$	$20T_{416}^{+*}$	10240	$[20, 8, 2^6, 1^{12}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{26}^*)^2$	$20T_{302}^{+*}$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{26}^*)^2$	$20T_{339}^*$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{26}^*)^2$	$20T_{346}^{+*}$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{26}^*)^2$	$20T_{356}^*$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{26}^*)^2$	$20T_{425}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{26}^*)^2$	$20T_{431}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{26}^*)^2$	$20T_{446}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{26}^*)^2$	$20T_{451}^{+*}$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{26}^*)^2$	$20T_{521}^*$	20480	$[20, 8, 4^3, 2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{26}^*, 8T_{29}^{+*}$	$20T_{241}^{+*}$	2560	$[20, 8, 2^4, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{26}^*, 8T_{29}^{+*}$	$20T_{242}^{+*}$	2560	$[20, 8, 2^4, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{26}^*, 8T_{29}^{+*}$	$20T_{248}^*$	2560	$[20, 8, 2^4, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{26}^*, 8T_{29}^{+*}$	$20T_{324}^{+*}$	5120	$[20, 8, 2^5, 1^{13}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{26}^*, 8T_{29}^{+*}$	$20T_{325}^*$	5120	$[20, 8, 2^5, 1^{13}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{26}^*, 8T_{29}^{+*}$	$20T_{349}^*$	5120	$[20, 8, 4, 2^3, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{26}^*, 8T_{29}^{+*}$	$20T_{352}^*$	5120	$[20, 8, 4, 2^3, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{26}^*, 8T_{29}^{+*}$	$20T_{442}^*$	10240	$[20, 8, 4, 2^4, 1^{13}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{27}^*)^2$	$20T_{189}^*$	1280	$[20, 4, 2^4, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{27}^*)^2$	$20T_{195}^*$	1280	$[20, 4, 2^4, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{27}^*)^2$	$20T_{261}^*$	2560	$[20, 8, 2^4, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{27}^*)^2$	$20T_{511}^{+*}$	20480	$[20, 8, 2^7, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{27}^*)^2$	$20T_{514}^*$	20480	$[20, 8, 2^7, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{27}^*)^2$	$20T_{524}^*$	20480	$[20, 8, 2^7, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{27}^*)^2$	$20T_{529}^*$	20480	$[20, 8, 2^7, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{27}^*)^2$	$20T_{633}^*$	40960	$[20, 8, 2^8, 1^{10}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{28}^*, 8T_{30}^*$	$20T_{252}^{+*}$	2560	$[20, 8, 2^4, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{28}^*, 8T_{30}^*$	$20T_{320}^*$	5120	$[20, 8, 2^5, 1^{13}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{28}^*, 8T_{30}^*$	$20T_{354}^{+*}$	5120	$[20, 8, 2^5, 1^{13}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{28}^*, 8T_{30}^*$	$20T_{450}^*$	10240	$[20, 8, 4, 2^4, 1^{13}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{29}^{+*})^2$	$20T_{355}^*$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{29}^{+*})^2$	$20T_{357}^*$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{29}^{+*})^2$	$20T_{404}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{29}^{+*})^2$	$20T_{405}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{29}^{+*})^2$	$20T_{439}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{29}^{+*})^2$	$20T_{445}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{29}^{+*})^2$	$20T_{522}^*$	20480	$[20, 8, 4^3, 2, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{32}^{+*}, 8T_{38}^*$	$20T_{566}^+$	30720	$[20, 8, 6, 2^5, 1^{12}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{32}^{+*}, 8T_{38}^*$	$20T_{569}^+$	30720	$[20, 8, 6, 2^5, 1^{12}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{301}^{+*}$	5120	$[20, 8, 4, 2^3, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{342}^{+*}$	5120	$[20, 8, 4, 2^3, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{413}^*$	10240	$[20, 8, 2^6, 1^{12}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{414}^*$	10240	$[20, 8, 4, 2^4, 1^{13}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{436}^*$	10240	$[20, 8, 2^6, 1^{12}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{438}^{+*}$	10240	$[20, 8, 4, 2^4, 1^{13}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{527}^*$	20480	$[20, 8, 4, 2^5, 1^{12}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{745}^*$	81920	$[20, 8, 4^2, 2^5, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{746}^{+*}$	81920	$[20, 8, 4^2, 2^5, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{748}^{+*}$	81920	$[20, 8, 4^2, 2^5, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{750}^*$	81920	$[20, 8, 4^2, 2^5, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{844}^*$	163840	$[20, 8, 4^3, 2^4, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{845}^*$	163840	$[20, 8, 4^3, 2^4, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{848}^*$	163840	$[20, 8, 4^3, 2^4, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{849}^*$	163840	$[20, 8, 4^2, 2^6, 1^{10}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{852}^*$	163840	$[20, 8, 4^2, 2^6, 1^{10}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{853}^{+*}$	163840	$[20, 8, 4^3, 2^4, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{35}^*)^2$	$20T_{905}^*$	327680	$[20, 8, 4^3, 2^5, 1^{10}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{38}^*)^2$	$20T_{366}^*$	7680	$[20, 8, 6, 2^3, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{38}^*)^2$	$20T_{373}^*$	7680	$[20, 8, 6, 2^3, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{38}^*)^2$	$20T_{663}^+$	61440	$[20, 8, 6, 2^6, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{38}^*)^2$	$20T_{666}^+$	61440	$[20, 8, 6, 2^6, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{38}^*)^2$	$20T_{672}^*$	61440	$[20, 8, 6, 2^6, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{38}^*)^2$	$20T_{694}^*$	61440	$[20, 8, 6, 2^6, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{38}^*)^2$	$20T_{798}^*$	122880	$[20, 8, 6, 2^7, 1^{10}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{38}^*)^2$	$20T_{803}^*$	122880	$[20, 8, 6, 2^7, 1^{10}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{39}^{+*}, 8T_{44}^*$	$20T_{667}^+$	61440	$[20, 8, 6, 4, 2^4, 1^{12}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, 8T_{40}^*, 8T_{44}^*$	$20T_{681}^+$	61440	$[20, 8, 6, 4, 2^4, 1^{12}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{44}^*)^2$	$20T_{370}^*$	7680	$[20, 8, 6, 2^3, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{44}^*)^2$	$20T_{375}^*$	7680	$[20, 8, 6, 2^3, 1^{14}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{44}^*)^2$	$20T_{466}^*$	15360	$[20, 8, 6, 4, 2^2, 1^{14}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{44}^*)^2$	$20T_{794}^+$	122880	$[20, 8, 6, 4, 2^5, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{44}^*)^2$	$20T_{796}$	122880	$[20, 8, 6, 4, 2^5, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{44}^*)^2$	$20T_{797}$	122880	$[20, 8, 6, 4, 2^5, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{44}^*)^2$	$20T_{802}$	122880	$[20, 8, 6, 4, 2^5, 1^{11}]$
$[8^2, 2, 1^2]$	$(1T_1)^2, 2T_1, (8T_{44}^*)^2$	$20T_{887}$	245760	$[20, 8, 6, 4, 2^6, 1^{10}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_6^{+*}$	$20T_{77}^*$	320	$[20, 16, 1^{18}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{10}^{+*}$	$20T_{80}^*$	320	$[20, 16, 1^{18}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{41}^{+*}$	$20T_{132}^*$	640	$[20, 16, 2, 1^{17}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{52}^{+*}$	$20T_{129}^*$	640	$[20, 16, 2, 1^{17}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{159}^{+*}$	$20T_{194}^*$	1280	$[20, 16, 4, 1^{17}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{485}^{+*}$	$20T_{338}^*$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{502}^{+*}$	$20T_{317}^*$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{521}^{+*}$	$20T_{309}^*$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{578}^{+*}$	$20T_{312}^+$	5120	$[20, 8, 4^2, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{852}^{+*}$	$20T_{437}^*$	10240	$[20, 16, 4^2, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{863}^{+*}$	$20T_{435}^*$	10240	$[20, 16, 4^2, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{864}^{+*}$	$20T_{417}^*$	10240	$[20, 16, 4^2, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{888}^*$	$20T_{448}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{898}^{+*}$	$20T_{447}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{911}^{+*}$	$20T_{444}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{925}^{+*}$	$20T_{449}^*$	10240	$[20, 8, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{939}^{+*}$	$20T_{441}^*$	10240	$[20, 16, 4^2, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1004}^{+*}$	$20T_{411}^*$	10240	$[20, 16, 4^2, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1018}^{+*}$	$20T_{419}^*$	10240	$[20, 16, 4^2, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1090}^{+*}$	$20T_{516}^*$	20480	$[20, 16, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1096}^{+*}$	$20T_{515}^*$	20480	$[20, 16, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1156}^*$	$20T_{520}^*$	20480	$[20, 16, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1164}^{+*}$	$20T_{510}^*$	20480	$[20, 16, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1164}^{+*}$	$20T_{523}^*$	20480	$[20, 16, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1186}^*$	$20T_{512}^*$	20480	$[20, 16, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1186}^{+*}$	$20T_{518}^*$	20480	$[20, 16, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1192}^*$	$20T_{517}^*$	20480	$[20, 8, 4^3, 2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1224}^{+*}$	$20T_{526}^*$	20480	$[20, 8, 4^3, 2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1237}^{+*}$	$20T_{530}^*$	20480	$[20, 16, 4^2, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1302}^*$	$20T_{556}^+$	30720	$[20, 16, 12, 4, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1303}^{+*}$	$20T_{562}^*$	30720	$[20, 16, 12, 4, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1306}^{+*}$	$20T_{558}^*$	30720	$[20, 16, 12, 4, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1319}^{+*}$	$20T_{560}^*$	30720	$[20, 16, 12, 4, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1323}^{+*}$	$20T_{564}^*$	30720	$[20, 16, 12, 4, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1326}^*$	$20T_{571}^+$	30720	$[20, 16, 12, 4, 2, 1^{15}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1385}^{+*}$	$20T_{632}^*$	40960	$[20, 16, 4^3, 2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1388}^*$	$20T_{634}^*$	40960	$[20, 16, 4^3, 2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1510}^{+*}$	$20T_{680}^*$	61440	$[20, 16, 12, 4, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1511}^{+*}$	$20T_{686}^*$	61440	$[20, 16, 12, 4, 2^2, 1^{14}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1513}^{+*}$	$20T_{690}^*$	61440	$[20, 16, 12, 4, 2^2, 1^{14}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1518}^*$	$20T_{685}^+$	61440	[20, 16, 12, 4, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1524}^*$	$20T_{687}^+$	61440	[20, 16, 12, 8, 2, 1 <sup>15</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1527}^*$	$20T_{679}^+$	61440	[20, 16, 12, 4, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1528}^{+*}$	$20T_{688}^+$	61440	[20, 16, 12, 4, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1530}^{+*}$	$20T_{668}^+$	61440	[20, 16, 12, 4, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1532}^{+*}$	$20T_{675}^+$	61440	[20, 16, 12, 8, 2, 1 <sup>15</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1533}^{+*}$	$20T_{692}^+$	61440	[20, 16, 12, 8, 2, 1 <sup>15</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1535}^{+*}$	$20T_{691}^+$	61440	[20, 16, 12, 8, 2, 1 <sup>15</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1539}^{+*}$	$20T_{684}^+$	61440	[20, 16, 12, 8, 2, 1 <sup>15</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1540}^*$	$20T_{682}^+$	61440	[20, 16, 12, 8, 2, 1 <sup>15</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1541}^{+*}$	$20T_{665}^+$	61440	[20, 16, 12, 4, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1656}^{+*}$	$20T_{805}^+$	122880	[20, 16, 12, 4 <sup>2</sup> , 2, 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1657}^*$	$20T_{812}^+$	122880	[20, 16, 12, 4 <sup>2</sup> , 2, 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1659}^{+*}$	$20T_{804}^+$	122880	[20, 16, 12, 8, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1661}^{+*}$	$20T_{790}^+$	122880	[20, 16, 12, 8, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1663}^{+*}$	$20T_{807}^+$	122880	[20, 16, 12, 8, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1666}^*$	$20T_{810}^+$	122880	[20, 16, 12, 8, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1674}^*$	$20T_{793}^+$	122880	[20, 16, 12, 8, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1677}^{+*}$	$20T_{792}^+$	122880	[20, 16, 12, 8, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1678}^*$	$20T_{801}^+$	122880	[20, 16, 12, 8, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1679}^*$	$20T_{806}^+$	122880	[20, 16, 12, 4 <sup>2</sup> , 2, 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1682}^{+*}$	$20T_{800}^+$	122880	[20, 16, 12, 8, 2 <sup>2</sup> , 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1683}^{+*}$	$20T_{795}^+$	122880	[20, 16, 12, 4 <sup>2</sup> , 2, 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1723}^*$	$20T_{847}^*$	163840	[20, 16, 4 <sup>2</sup> , 2 <sup>5</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1723}^{+*}$	$20T_{854}^{+*}$	163840	[20, 16, 4 <sup>2</sup> , 2 <sup>5</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1723}^*$	$20T_{910}^*$	327680	[20, 16, 4 <sup>2</sup> , 2 <sup>6</sup> , 1 <sup>10</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1726}^{+*}$	$20T_{850}^{+*}$	163840	[20, 16, 4 <sup>2</sup> , 2 <sup>5</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1726}^*$	$20T_{851}^*$	163840	[20, 16, 4 <sup>2</sup> , 2 <sup>5</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1726}^*$	$20T_{908}^*$	327680	[20, 16, 4 <sup>2</sup> , 2 <sup>6</sup> , 1 <sup>10</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1757}^{+*}$	$20T_{886}^+$	245760	[20, 16, 12, 8, 4, 2, 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1758}^*$	$20T_{885}^+$	245760	[20, 16, 12, 8, 4, 2, 1 <sup>14</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1771}^*$	$20T_{906}^*$	327680	[20, 16, 4 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1771}^*$	$20T_{907}^*$	327680	[20, 16, 4 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1771}^*$	$20T_{909}^*$	327680	[20, 16, 4 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1771}^{+*}$	$20T_{911}^{+*}$	327680	[20, 16, 4 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1771}^*$	$20T_{946}^*$	655360	[20, 16, 4 <sup>3</sup> , 2 <sup>5</sup> , 1 <sup>10</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1810}^*$	$20T_{933}^+$	491520	[20, 16, 12, 4, 2 <sup>5</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1810}^*$	$20T_{968}^+$	983040	[20, 16, 12, 4, 2 <sup>6</sup> , 1 <sup>10</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1845}^*$	$20T_{963}^+$	983040	[20, 16, 12, 4 <sup>2</sup> , 2 <sup>4</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1845}^*$	$20T_{967}^+$	983040	[20, 16, 12, 4 <sup>2</sup> , 2 <sup>4</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1845}^*$	$20T_{995}^+$	1966080	[20, 16, 12, 4 <sup>2</sup> , 2 <sup>5</sup> , 1 <sup>10</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1848}^*$	$20T_{964}^+$	983040	[20, 16, 12, 8, 2 <sup>5</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1848}^*$	$20T_{965}^+$	983040	[20, 16, 12, 8, 2 <sup>5</sup> , 1 <sup>11</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1848}^*$	$20T_{992}^*$	1966080	[20, 16, 12, 8, 2 <sup>6</sup> , 1 <sup>10</sup> ]
[16, 2, 1 <sup>2</sup> ]	$(1T_1)^2, 2T_1, 16T_{1849}^*$	$20T_{962}^+$	983040	[20, 16, 12, 8, 2 <sup>5</sup> , 1 <sup>11</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

⇒

Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1849}^*$	$20T_{966}$	983040	$[20, 16, 12, 8, 2^5, 1^{11}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1849}^*$	$20T_{991}$	1966080	$[20, 16, 12, 8, 2^6, 1^{10}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1879}^*$	$20T_{989}$	1966080	$[20, 16, 12, 8, 4, 2^4, 1^{11}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1879}^*$	$20T_{990}$	1966080	$[20, 16, 12, 8, 4, 2^4, 1^{11}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1879}^*$	$20T_{993}$	1966080	$[20, 16, 12, 8, 4, 2^4, 1^{11}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1879}^*$	$20T_{994}^+$	1966080	$[20, 16, 12, 8, 4, 2^4, 1^{11}]$
$[16, 2, 1^2]$	$(1T_1)^2, 2T_1, 16T_{1879}^*$	$20T_{1015}$	3932160	$[20, 16, 12, 8, 4, 2^5, 1^{10}]$
$[3^6, 1^2]$	$(1T_1)^2, (3T_1^{+*})^6$	$20T_{15}^+$	60	$[20, 3, 1^{18}]$
$[6, 3^4, 1^2]$	$(1T_1)^2, (3T_2^*)^4, 6T_2^*$	$20T_{30}$	120	$[20, 3, 2, 1^{17}]$
$[6^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (6T_2^*)^2$	$20T_{31}^+$	120	$[20, 6, 1^{18}]$
$[6^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (6T_2^*)^2$	$20T_{32}^+$	120	$[20, 6, 1^{18}]$
$[6^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (6T_2^*)^2$	$20T_{36}^+$	120	$[20, 6, 1^{18}]$
$[6^2, 3^2, 1^2]$	$(1T_1)^2, (3T_2^*)^2, (6T_3^*)^2$	$20T_{62}^+$	240	$[20, 6, 2, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{90}^{+*}$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{91}^*$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{97}^{+*}$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{98}^{+*}$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{99}^{+*}$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{104}^*$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{105}^*$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{110}^{+*}$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{111}^*$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{113}^*$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{114}^{+*}$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{115}^{+*}$	400	$[20, 5, 4, 1^{17}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{154}^{+*}$	800	$[20, 5, 4, 2, 1^{16}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{161}^{+*}$	800	$[20, 5, 4, 2, 1^{16}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{162}^{+*}$	800	$[20, 5, 4, 2, 1^{16}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{164}^*$	800	$[20, 5, 4, 2, 1^{16}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{165}^*$	800	$[20, 5, 4, 2, 1^{16}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{211}^*$	1600	$[20, 5, 4^2, 1^{16}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, (5T_3^*)^2$	$20T_{215}^{+*}$	1600	$[20, 5, 4^2, 1^{16}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2, (5T_4^+)^2$	$20T_{456}^+$	14400	$[20, 5, 4^2, 3^2, 1^{14}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2, (5T_4^+)^2$	$20T_{457}$	14400	$[20, 5, 4^2, 3^2, 1^{14}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2, (5T_4^+)^2$	$20T_{458}^+$	14400	$[20, 5, 4^2, 3^2, 1^{14}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2, (5T_4^+)^2$	$20T_{460}$	14400	$[20, 5, 4^2, 3^2, 1^{14}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, (5T_5^*)^2$	$20T_{541}$	28800	$[20, 5, 4^2, 3^2, 2, 1^{13}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, (5T_5^*)^2$	$20T_{543}$	28800	$[20, 5, 4^2, 3^2, 2, 1^{13}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, (5T_5^*)^2$	$20T_{544}^+$	28800	$[20, 5, 4^2, 3^2, 2, 1^{13}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, (5T_5^*)^2$	$20T_{545}^+$	28800	$[20, 5, 4^2, 3^2, 2, 1^{13}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, (5T_5^*)^2$	$20T_{548}^+$	28800	$[20, 5, 4^2, 3^2, 2, 1^{13}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, (5T_5^*)^2$	$20T_{654}$	57600	$[20, 5, 4^2, 3^2, 2^2, 1^{12}]$
$[5^2, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, (5T_5^*)^2$	$20T_{656}^+$	57600	$[20, 5, 4^2, 3^2, 2^2, 1^{12}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_3^*$	$20T_{155}^*$	800	$[20, 10, 2^2, 1^{16}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_4^*$	$20T_{95}^*$	400	$[20, 10, 2, 1^{17}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees



Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_4^*$	$20T_{101}^*$	400	$[20, 10, 2, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_4^*$	$20T_{108}^*$	400	$[20, 10, 2, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_4^*$	$20T_{112}^*$	400	$[20, 10, 2, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_4^*$	$20T_{157}^*$	800	$[20, 10, 2^2, 1^{16}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{153}^*$	800	$[20, 10, 4, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{156}^*$	800	$[20, 10, 4, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{158}^*$	800	$[20, 10, 4, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{159}^*$	800	$[20, 10, 4, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{160}^*$	800	$[20, 10, 4, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{163}^*$	800	$[20, 10, 4, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{166}^*$	800	$[20, 10, 4, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{170}^*$	800	$[20, 10, 4, 1^{17}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{210}^*$	1600	$[20, 10, 4, 2, 1^{16}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{212}^*$	1600	$[20, 10, 4, 2, 1^{16}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{213}^*$	1600	$[20, 10, 4, 2, 1^{16}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{214}^*$	1600	$[20, 10, 4, 2, 1^{16}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_1^*)^2, 10T_5^*$	$20T_{271}^*$	3200	$[20, 10, 4^2, 1^{16}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{15}^{+*}$	$20T_{533}^{+*}$	25600	$[20, 10, 4, 2^5, 1^{12}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{15}^{+*}$	$20T_{535}^{+*}$	25600	$[20, 10, 4, 2^5, 1^{12}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{15}^{+*}$	$20T_{638}^{+*}$	51200	$[20, 10, 4^2, 2^4, 1^{12}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{16}^*$	$20T_{536}^*$	25600	$[20, 10, 4, 2^5, 1^{12}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{16}^*$	$20T_{537}^{+*}$	25600	$[20, 10, 4, 2^5, 1^{12}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{16}^*$	$20T_{641}^*$	51200	$[20, 10, 4^2, 2^4, 1^{12}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{636}^{+*}$	51200	$[20, 10, 4, 2^6, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{637}^*$	51200	$[20, 10, 4, 2^6, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{639}^*$	51200	$[20, 10, 4, 2^6, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{640}^*$	51200	$[20, 10, 4, 2^6, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{642}^{+*}$	51200	$[20, 10, 4, 2^6, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{649}^{+*}$	51200	$[20, 10, 4, 2^6, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{653}^*$	51200	$[20, 10, 4, 2^6, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{755}^*$	102400	$[20, 10, 4^2, 2^5, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{756}^*$	102400	$[20, 10, 4^2, 2^5, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{760}^{+*}$	102400	$[20, 10, 4^2, 2^5, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{771}^*$	102400	$[20, 10, 4^2, 2^5, 1^{11}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{776}^*$	102400	$[20, 10, 4, 2^7, 1^{10}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{780}^*$	102400	$[20, 10, 4, 2^7, 1^{10}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_3^*)^2, 10T_{23}^*$	$20T_{876}^*$	204800	$[20, 10, 4^2, 2^6, 1^{10}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2, 10T_{11}$	$20T_{546}^*$	28800	$[20, 10, 4^2, 3^2, 1^{14}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_4^{+*})^2, 10T_{12}$	$20T_{539}^*$	28800	$[20, 10, 4^2, 3^2, 1^{14}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, 10T_{11}$	$20T_{542}^*$	28800	$[20, 10, 4^2, 3^2, 1^{14}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, 10T_{12}$	$20T_{547}^*$	28800	$[20, 10, 4^2, 3^2, 1^{14}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, 10T_{22}$	$20T_{655}^*$	57600	$[20, 10, 4^2, 3^2, 2, 1^{13}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, 10T_{22}$	$20T_{657}^*$	57600	$[20, 10, 4^2, 3^2, 2, 1^{13}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, 10T_{22}$	$20T_{658}^*$	57600	$[20, 10, 4^2, 3^2, 2, 1^{13}]$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, 10T_{22}$	$20T_{659}^*$	57600	$[20, 10, 4^2, 3^2, 2, 1^{13}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[10, 4^2, 1^2]$	$(1T_1)^2, (4T_5^*)^2, 10T_{22}$	$20T_{781}$	115200	$[20, 10, 4^2, 3^2, 2^2, 1^{12}]$
$[6^3, 1^2]$	$(1T_1)^2, (6T_7^*)^3$	$20T_{35}$	120	$[20, 6, 1^{18}]$
$[6^3, 1^2]$	$(1T_1)^2, (6T_3^*)^3$	$20T_{65}$	240	$[20, 6, 2, 1^{17}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_7^{+*}, 12T_{21}^{+*}$	$20T_{172}^+$	960	$[20, 12, 2^2, 1^{16}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_7^{+*}, 12T_{48}^{+*}$	$20T_{219}^+$	1920	$[20, 12, 4, 2, 1^{16}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_7^{+*}, 12T_{69}^{+*}$	$20T_{228}^+$	1920	$[20, 12, 2^3, 1^{15}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_7^{+*}, 12T_{109}^{+*}$	$20T_{281}^+$	3840	$[20, 12, 4, 2^2, 1^{15}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_8^*, 12T_{30}^*$	$20T_{177}^+$	960	$[20, 12, 2^2, 1^{16}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_8^*, 12T_{53}^*$	$20T_{223}$	1920	$[20, 12, 4, 2, 1^{16}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{50}^*$	$20T_{224}^+$	1920	$[20, 12, 2^3, 1^{15}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{50}^*$	$20T_{225}^+$	1920	$[20, 12, 2^3, 1^{15}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{52}^*$	$20T_{218}$	1920	$[20, 12, 2^3, 1^{15}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{54}^*$	$20T_{222}^+$	1920	$[20, 12, 2^3, 1^{15}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{69}^{+*}$	$20T_{280}$	3840	$[20, 12, 2^4, 1^{14}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{86}^*$	$20T_{285}$	3840	$[20, 12, 4, 2^2, 1^{15}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{86}^*$	$20T_{289}^+$	3840	$[20, 12, 4, 2^2, 1^{15}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{109}^{+*}$	$20T_{291}$	3840	$[20, 12, 2^4, 1^{14}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{109}^{+*}$	$20T_{365}$	7680	$[20, 12, 4, 2^3, 1^{14}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{135}^*$	$20T_{570}^+$	30720	$[20, 12, 2^7, 1^{11}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{135}^*$	$20T_{693}$	61440	$[20, 12, 2^8, 1^{10}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{193}^*$	$20T_{674}$	61440	$[20, 12, 4, 2^6, 1^{11}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{193}^*$	$20T_{676}^+$	61440	$[20, 12, 4, 2^6, 1^{11}]$
$[12, 6, 1^2]$	$(1T_1)^2, 6T_{11}^*, 12T_{193}^*$	$20T_{808}$	122880	$[20, 12, 4, 2^7, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{16}^*, 10T_{25}^*$	$20T_{643}^*$	51200	$[20, 10, 8, 2^5, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{16}^*, 10T_{25}^*$	$20T_{645}^{+*}$	51200	$[20, 10, 8, 2^5, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{16}^*, 10T_{25}^*$	$20T_{646}^{+*}$	51200	$[20, 10, 8, 2^5, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{16}^*, 10T_{25}^*$	$20T_{652}^{+*}$	51200	$[20, 10, 8, 2^5, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{16}^*, 10T_{25}^*$	$20T_{767}^{+*}$	102400	$[20, 10, 8, 4, 2^4, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{16}^*, 10T_{25}^*$	$20T_{770}^*$	102400	$[20, 10, 8, 4, 2^4, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{16}^*, 10T_{25}^*$	$20T_{869}^*$	204800	$[20, 10, 8^2, 2^4, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{20}^{+*}, 10T_{24}^{+*}$	$20T_{644}^{+*}$	51200	$[20, 10, 8, 2^5, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{20}^{+*}, 10T_{24}^{+*}$	$20T_{648}^{+*}$	51200	$[20, 10, 8, 2^5, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{20}^{+*}, 10T_{24}^{+*}$	$20T_{650}^{+*}$	51200	$[20, 10, 8, 2^5, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{20}^{+*}, 10T_{24}^{+*}$	$20T_{651}^{+*}$	51200	$[20, 10, 8, 2^5, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{20}^{+*}, 10T_{24}^{+*}$	$20T_{764}^{+*}$	102400	$[20, 10, 8, 4, 2^4, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{20}^{+*}, 10T_{24}^{+*}$	$20T_{777}^{+*}$	102400	$[20, 10, 8, 4, 2^4, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{20}^{+*}, 10T_{24}^{+*}$	$20T_{860}^{+*}$	204800	$[20, 10, 8^2, 2^4, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{757}^{+*}$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{758}^*$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{759}^*$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{761}^{+*}$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{762}^*$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{763}^{+*}$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{765}^*$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{766}^{+*}$	102400	$[20, 10, 8, 2^6, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{768}^{+*}$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{769}^{+*}$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{772}^*$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{773}^{+*}$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{774}^*$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{775}^*$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{778}^*$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{779}^*$	102400	$[20, 10, 8, 2^6, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{859}^*$	204800	$[20, 10, 8, 2^7, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{861}^*$	204800	$[20, 10, 8, 2^7, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{862}^*$	204800	$[20, 10, 8, 2^7, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{863}^*$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{864}^{+*}$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{865}^{+*}$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{866}^*$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{867}^*$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{868}^*$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{870}^*$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{871}^*$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{872}^{+*}$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{873}^*$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{874}^*$	204800	$[20, 10, 8, 2^7, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{875}^*$	204800	$[20, 10, 8, 4, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{923}^*$	409600	$[20, 10, 8^2, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{924}^*$	409600	$[20, 10, 8^2, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{925}^*$	409600	$[20, 10, 8, 4, 2^6, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{926}^{+*}$	409600	$[20, 10, 8^2, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{927}^*$	409600	$[20, 10, 8^2, 2^5, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{928}^*$	409600	$[20, 10, 8, 4, 2^6, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{27}^*, 10T_{29}^*$	$20T_{955}^*$	819200	$[20, 10, 8^2, 2^6, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{32}^+, 10T_{34}^+$	$20T_{985}^+$	1843200	$[20, 10, 8^2, 6^2, 2^2, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{38}^*, 10T_{36}$	$20T_{1008}^+$	3686400	$[20, 10, 8^2, 6^2, 2^3, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{38}^*, 10T_{36}$	$20T_{1010}$	3686400	$[20, 10, 8^2, 6^2, 2^3, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{38}^*, 10T_{36}$	$20T_{1023}$	7372800	$[20, 10, 8^2, 6^2, 2^4, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{39}^{+*}, 10T_{37}^+$	$20T_{1012}^+$	3686400	$[20, 10, 8^2, 6^2, 4, 2, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{39}^{+*}, 10T_{37}^+$	$20T_{1013}^+$	3686400	$[20, 10, 8^2, 6^2, 4, 2, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{39}^{+*}, 10T_{37}^+$	$20T_{1030}^+$	7372800	$[20, 10, 8^2, 6^2, 4^2, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{40}^*, 10T_{38}$	$20T_{1009}^+$	3686400	$[20, 10, 8^2, 6^2, 4, 2, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{40}^*, 10T_{38}$	$20T_{1011}$	3686400	$[20, 10, 8^2, 6^2, 4, 2, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{40}^*, 10T_{38}$	$20T_{1022}$	7372800	$[20, 10, 8^2, 6^2, 4^2, 1^{12}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1024}$	7372800	$[20, 10, 8^2, 6^2, 4, 2^2, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1025}^+$	7372800	$[20, 10, 8^2, 6^2, 4, 2^2, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1026}$	7372800	$[20, 10, 8^2, 6^2, 4, 2^2, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1027}$	7372800	$[20, 10, 8^2, 6^2, 4, 2^2, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1028}^+$	7372800	$[20, 10, 8^2, 6^2, 4, 2^2, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1029}$	7372800	$[20, 10, 8^2, 6^2, 4, 2^2, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1031}^+$	7372800	$[20, 10, 8^2, 6^2, 4, 2^2, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1036}$	14745600	$[20, 10, 8^2, 6^2, 4, 2^3, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1037}$	14745600	$[20, 10, 8^2, 6^2, 4, 2^3, 1^{10}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1038}$	14745600	$[20, 10, 8^2, 6^2, 4^2, 2, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1039}$	14745600	$[20, 10, 8^2, 6^2, 4^2, 2, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1040}^+$	14745600	$[20, 10, 8^2, 6^2, 4^2, 2, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1041}$	14745600	$[20, 10, 8^2, 6^2, 4^2, 2, 1^{11}]$
$[10, 8, 1^2]$	$(1T_1)^2, 8T_{44}^*, 10T_{39}$	$20T_{1045}$	29491200	$[20, 10, 8^2, 6^2, 4^2, 2^2, 1^{10}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_5^{+*})^2$	$20T_{89}^+$	360	$[20, 9, 2, 1^{17}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_8^*)^2$	$20T_{149}^+$	720	$[20, 9, 2^2, 1^{16}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_9^{+*})^2$	$20T_{145}^+$	720	$[20, 9, 4, 1^{17}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_9^{+*})^2$	$20T_{146}^+$	720	$[20, 9, 4, 1^{17}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_9^{+*})^2$	$20T_{148}^+$	720	$[20, 9, 4, 1^{17}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_9^{+*})^2$	$20T_{151}^+$	720	$[20, 9, 4, 1^{17}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_9^{+*})^2$	$20T_{152}^+$	720	$[20, 9, 4, 1^{17}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{14}^{+*})^2$	$20T_{202}^+$	1440	$[20, 9, 8, 1^{17}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{14}^{+*})^2$	$20T_{204}^+$	1440	$[20, 9, 8, 1^{17}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{15}^*)^2$	$20T_{205}^+$	1440	$[20, 9, 8, 1^{17}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{15}^*)^2$	$20T_{208}^+$	1440	$[20, 9, 8, 1^{17}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{16}^*)^2$	$20T_{198}^+$	1440	$[20, 9, 4, 2, 1^{16}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{16}^*)^2$	$20T_{199}^+$	1440	$[20, 9, 4, 2, 1^{16}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{16}^*)^2$	$20T_{201}^+$	1440	$[20, 9, 4, 2, 1^{16}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{19}^*)^2$	$20T_{266}^+$	2880	$[20, 9, 8, 2, 1^{16}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{33}^+)^2$	$20T_{1006}^+$	3628800	$[20, 9, 8, 7, 6, 5, 4, 3, 1^{12}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{33}^+)^2$	$20T_{1007}^+$	3628800	$[20, 9, 8, 7, 6, 5, 4, 3, 1^{12}]$
$[9^2, 1^2]$	$(1T_1)^2, (9T_{34}^+)^2$	$20T_{1021}^+$	7257600	$[20, 9, 8, 7, 6, 5, 4, 3, 2, 1^{11}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{10}^*$	$20T_{150}$	720	$[20, 18, 2, 1^{17}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{28}^*$	$20T_{200}$	1440	$[20, 18, 4, 1^{17}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{35}^*$	$20T_{197}$	1440	$[20, 18, 4, 1^{17}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{73}^*$	$20T_{265}$	2880	$[20, 18, 4, 2, 1^{16}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{182}^{+*}$	$20T_{452}^+$	11520	$[20, 18, 8, 2^2, 1^{15}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{275}^{+*}$	$20T_{531}^+$	23040	$[20, 18, 8, 4, 2, 1^{15}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{549}^{+*}$	$20T_{857}^+$	184320	$[20, 18, 8, 2^6, 1^{11}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{622}^{+*}$	$20T_{919}^+$	368640	$[20, 18, 16, 2^6, 1^{11}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{624}^*$	$20T_{913}$	368640	$[20, 18, 16, 2^6, 1^{11}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{625}^*$	$20T_{915}$	368640	$[20, 18, 8, 2^7, 1^{10}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{626}^*$	$20T_{916}$	368640	$[20, 18, 8, 4, 2^5, 1^{11}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{628}^{+*}$	$20T_{917}^+$	368640	$[20, 18, 16, 2^6, 1^{11}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{629}^{+*}$	$20T_{920}^+$	368640	$[20, 18, 16, 2^6, 1^{11}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{630}^{+*}$	$20T_{914}^+$	368640	$[20, 18, 8, 4, 2^5, 1^{11}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{689}^*$	$20T_{947}$	737280	$[20, 18, 16, 2^7, 1^{10}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{690}^*$	$20T_{948}$	737280	$[20, 18, 16, 2^7, 1^{10}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{691}^*$	$20T_{953}$	737280	$[20, 18, 8, 4, 2^6, 1^{10}]$
$[18, 1^2]$	$(1T_1)^2, 18T_{692}^{+*}$	$20T_{952}^+$	737280	$[20, 18, 16, 4, 2^5, 1^{11}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[18, 1 <sup>2</sup> ]	$(1T_1)^2, 18T_{693}^*$	$20T_{954}$	737280	[20, 18, 16, 4, 2 <sup>5</sup> , 1 <sup>11</sup> ]
[18, 1 <sup>2</sup> ]	$(1T_1)^2, 18T_{694}^*$	$20T_{949}$	737280	[20, 18, 16, 4, 2 <sup>5</sup> , 1 <sup>11</sup> ]
[18, 1 <sup>2</sup> ]	$(1T_1)^2, 18T_{695}^*$	$20T_{951}$	737280	[20, 18, 16, 4, 2 <sup>5</sup> , 1 <sup>11</sup> ]
[18, 1 <sup>2</sup> ]	$(1T_1)^2, 18T_{763}^*$	$20T_{981}$	1474560	[20, 18, 16, 4, 2 <sup>6</sup> , 1 <sup>10</sup> ]
[18, 1 <sup>2</sup> ]	$(1T_1)^2, 18T_{963}^+$	$20T_{1100}^+$	928972800	[20, 18, 16, 14, 12, 10, 8, 6, 2, 1 <sup>11</sup> ]
[18, 1 <sup>2</sup> ]	$(1T_1)^2, 18T_{964}^+$	$20T_{1105}^+$	1857945600	[20, 18, 16, 14, 12, 10, 8, 6, 4, 1 <sup>11</sup> ]
[18, 1 <sup>2</sup> ]	$(1T_1)^2, 18T_{965}$	$20T_{1104}$	1857945600	[20, 18, 16, 14, 12, 10, 8, 6, 4, 1 <sup>11</sup> ]
[18, 1 <sup>2</sup> ]	$(1T_1)^2, 18T_{966}$	$20T_{1106}$	1857945600	[20, 18, 16, 14, 12, 10, 8, 6, 2 <sup>2</sup> , 1 <sup>10</sup> ]
[18, 1 <sup>2</sup> ]	$(1T_1)^2, 18T_{968}$	$20T_{1110}$	3715891200	[20, 18, 16, 14, 12, 10, 8, 6, 4, 2, 1 <sup>10</sup> ]
[6 <sup>2</sup> , 3, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 3T_1^{+*}, (6T_1^*)^2$	$20T_{37}^{+*}$	120	[20, 3, 2, 1 <sup>17</sup> ]
[6 <sup>2</sup> , 3, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 3T_2^*, (6T_2^*)^2$	$20T_{33}^*$	120	[20, 3, 2, 1 <sup>17</sup> ]
[6 <sup>2</sup> , 3, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 3T_2^*, (6T_3^*)^2$	$20T_{69}^*$	240	[20, 3, 2 <sup>2</sup> , 1 <sup>16</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{51}^*$	200	[20, 5, 2, 1 <sup>17</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{180}^*$	1000	[20, 5 <sup>2</sup> , 2, 1 <sup>16</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{182}^{+*}$	1000	[20, 5 <sup>2</sup> , 2, 1 <sup>16</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{183}^{+*}$	1000	[20, 5 <sup>2</sup> , 2, 1 <sup>16</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{184}^*$	1000	[20, 5 <sup>2</sup> , 2, 1 <sup>16</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{293}^{+*}$	5000	[20, 5 <sup>3</sup> , 2, 1 <sup>15</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{295}^{+*}$	5000	[20, 5 <sup>3</sup> , 2, 1 <sup>15</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{296}^{+*}$	5000	[20, 5 <sup>3</sup> , 2, 1 <sup>15</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{297}^*$	5000	[20, 5 <sup>3</sup> , 2, 1 <sup>15</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{298}^{+*}$	5000	[20, 5 <sup>3</sup> , 2, 1 <sup>15</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{300}^*$	5000	[20, 5 <sup>3</sup> , 2, 1 <sup>15</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{378}^*$	10000	[20, 5 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>14</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{386}^*$	10000	[20, 5 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>14</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{391}^{+*}$	10000	[20, 5 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>14</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{395}^{+*}$	10000	[20, 5 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>14</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{473}^{+*}$	20000	[20, 5 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{479}^*$	20000	[20, 5 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{489}^*$	20000	[20, 5 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{500}^{+*}$	20000	[20, 5 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{613}^{+*}$	40000	[20, 5 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>12</sup> ]
[5 <sup>3</sup> , 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, (5T_2^{+*})^3$	$20T_{614}^*$	40000	[20, 5 <sup>3</sup> , 2 <sup>4</sup> , 1 <sup>12</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_6^*$	$20T_{178}^*$	1000	[20, 5 <sup>2</sup> , 2, 1 <sup>16</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_6^*$	$20T_{179}^*$	1000	[20, 5 <sup>2</sup> , 2, 1 <sup>16</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_6^*$	$20T_{294}^*$	5000	[20, 5 <sup>3</sup> , 2, 1 <sup>15</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_9^*$	$20T_{233}^*$	2000	[20, 10, 5, 2, 1 <sup>16</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_9^*$	$20T_{234}^*$	2000	[20, 10, 5, 2, 1 <sup>16</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_9^*$	$20T_{380}^*$	10000	[20, 10, 5 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_9^*$	$20T_{396}^*$	10000	[20, 10, 5 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_9^*$	$20T_{398}^*$	10000	[20, 10, 5 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_9^*$	$20T_{403}^*$	10000	[20, 10, 5 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_9^*$	$20T_{476}^*$	20000	[20, 5 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_9^*$	$20T_{486}^*$	20000	[20, 10, 5 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>14</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_{10}^*$	$20T_{475}^*$	20000	[20, 10, 5 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>14</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_{10}^*$	$20T_{506}^*$	20000	[20, 5 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_{21}^*$	$20T_{606}^*$	40000	[20, 10, 5 <sup>2</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_{21}^*$	$20T_{609}^*$	40000	[20, 10, 5 <sup>2</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_{21}^*$	$20T_{615}^*$	40000	[20, 10, 5 <sup>2</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_{21}^*$	$20T_{625}^*$	40000	[20, 10, 5 <sup>2</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[10, 5, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 5T_2^{+*}, 10T_{21}^*$	$20T_{722}^*$	80000	[20, 10, 5 <sup>2</sup> , 2 <sup>4</sup> , 1 <sup>12</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{12}^{+*}$	$20T_{269}^{+*}$	3000	[20, 15, 5, 2, 1 <sup>16</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{14}^{+*}$	$20T_{270}^*$	3000	[20, 15, 5, 2, 1 <sup>16</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{18}^{+*}$	$20T_{361}^*$	6000	[20, 15, 10, 2, 1 <sup>16</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{30}^{+*}$	$20T_{464}^{+*}$	15000	[20, 15, 5 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{30}^{+*}$	$20T_{465}^{+*}$	15000	[20, 15, 5 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{31}^{+*}$	$20T_{463}^*$	15000	[20, 15, 5 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{40}^{+*}$	$20T_{549}^*$	30000	[20, 15, 10, 5, 2, 1 <sup>15</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{40}^{+*}$	$20T_{552}^*$	30000	[20, 15, 5 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>14</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{50}^{+*}$	$20T_{661}^{+*}$	60000	[20, 15, 5 <sup>2</sup> , 2 <sup>3</sup> , 1 <sup>13</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{50}^{+*}$	$20T_{788}^{+*}$	120000	[20, 15, 5 <sup>2</sup> , 2 <sup>4</sup> , 1 <sup>12</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{60}^{+*}$	$20T_{784}^*$	120000	[20, 15, 10, 5, 2 <sup>3</sup> , 1 <sup>13</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{60}^{+*}$	$20T_{786}^*$	120000	[20, 15, 10, 5, 2 <sup>3</sup> , 1 <sup>13</sup> ]
[15, 2 <sup>2</sup> , 1]	$1T_1, (2T_1)^2, 15T_{60}^{+*}$	$20T_{882}^*$	240000	[20, 15, 10, 5, 2 <sup>4</sup> , 1 <sup>12</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_1^{+*}, (4T_4^{+*})^4$	$20T_{67}^{+*}$	240	[20, 4, 3, 1 <sup>17</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_1^{+*}, (4T_4^{+*})^4$	$20T_{171}^{+*}$	960	[20, 4 <sup>2</sup> , 3, 1 <sup>16</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_1^{+*}, (4T_4^{+*})^4$	$20T_{286}^{+*}$	3840	[20, 4 <sup>3</sup> , 3, 1 <sup>15</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_1^{+*}, (4T_4^{+*})^4$	$20T_{469}^{+*}$	15360	[20, 4 <sup>4</sup> , 3, 1 <sup>14</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_1^{+*}, (4T_4^{+*})^4$	$20T_{929}^{+*}$	414720	[20, 4 <sup>4</sup> , 3 <sup>4</sup> , 1 <sup>11</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_1^{+*}, (4T_4^{+*})^4$	$20T_{979}^{+*}$	1244160	[20, 4 <sup>4</sup> , 3 <sup>5</sup> , 1 <sup>10</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_2^*, (4T_5^*)^4$	$20T_{374}^*$	7680	[20, 4 <sup>3</sup> , 3, 2, 1 <sup>14</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_2^*, (4T_5^*)^4$	$20T_{563}^*$	30720	[20, 4 <sup>4</sup> , 3, 2, 1 <sup>13</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_2^*, (4T_5^*)^4$	$20T_{958}^*$	829440	[20, 4 <sup>4</sup> , 3 <sup>4</sup> , 2, 1 <sup>10</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_2^*, (4T_5^*)^4$	$20T_{1004}^*$	2488320	[20, 4 <sup>4</sup> , 3 <sup>5</sup> , 2, 1 <sup>9</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_2^*, (4T_5^*)^4$	$20T_{1043}^{+*}$	19906560	[20, 4 <sup>4</sup> , 3 <sup>5</sup> , 2 <sup>4</sup> , 1 <sup>6</sup> ]
[4 <sup>4</sup> , 3, 1]	$1T_1, 3T_2^*, (4T_5^*)^4$	$20T_{1050}^*$	39813120	[20, 4 <sup>4</sup> , 3 <sup>5</sup> , 2 <sup>5</sup> , 1 <sup>5</sup> ]
[12, 4, 3, 1]	$1T_1, 3T_1^{+*}, 4T_1^*, 12T_1^*$	$20T_{68}^{+*}$	240	[20, 4, 3, 1 <sup>17</sup> ]
[12, 4, 3, 1]	$1T_1, 3T_1^{+*}, 4T_4^{+*}, 12T_{20}^{+*}$	$20T_{147}^+$	720	[20, 4, 3 <sup>2</sup> , 1 <sup>16</sup> ]
[12, 4, 3, 1]	$1T_1, 3T_1^{+*}, 4T_5^*, 12T_{45}^*$	$20T_{206}^+$	1440	[20, 4, 3 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[12, 4, 3, 1]	$1T_1, 3T_2^*, 4T_1^*, 12T_5^*$	$20T_{61}^*$	240	[20, 3, 2 <sup>2</sup> , 1 <sup>16</sup> ]
[12, 4, 3, 1]	$1T_1, 3T_2^*, 4T_1^*, 12T_{11}^*$	$20T_{121}^*$	480	[20, 4, 3, 2, 1 <sup>16</sup> ]
[12, 4, 3, 1]	$1T_1, 3T_2^*, 4T_4^{+*}, 12T_{43}^{+*}$	$20T_{203}^*$	1440	[20, 4, 3 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[12, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 12T_{44}^*$	$20T_{207}^*$	1440	[20, 4, 3 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[12, 4, 3, 1]	$1T_1, 3T_2^*, 4T_5^*, 12T_{83}^*$	$20T_{264}^*$	2880	[20, 4, 3 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>14</sup> ]
[10, 6, 3, 1]	$1T_1, 3T_2^*, 6T_2^*, 10T_7^+$	$20T_{363}^+$	7200	[20, 10, 6 <sup>2</sup> , 1 <sup>16</sup> ]
[10, 6, 3, 1]	$1T_1, 3T_2^*, 6T_3^*, 10T_{13}^*$	$20T_{459}^+$	14400	[20, 10, 6 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[10, 6, 3, 1]	$1T_1, 3T_2^*, 6T_3^*, 10T_{13}^*$	$20T_{461}^*$	14400	[20, 10, 6 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[10, 6, 3, 1]	$1T_1, 3T_2^*, 6T_3^*, 10T_{13}^*$	$20T_{540}^*$	28800	[20, 10, 6 <sup>2</sup> , 2 <sup>2</sup> , 1 <sup>14</sup> ]
[8 <sup>2</sup> , 3, 1]	$1T_1, 3T_1^{+*}, (8T_{13}^{+*})^2$	$20T_{122}^{+*}$	480	[20, 8, 3, 1 <sup>17</sup> ]
[8 <sup>2</sup> , 3, 1]	$1T_1, 3T_1^{+*}, (8T_{33}^{+*})^2$	$20T_{216}^{+*}$	1920	[20, 8, 4, 3, 1 <sup>16</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8^2, 3, 1]$	$1T_1, 3T_1^{+*}, (8T_{33}^{+*})^2$	$20T_{372}^{+*}$	7680	$[20, 8, 4^2, 3, 1^{15}]$
$[8^2, 3, 1]$	$1T_1, 3T_1^{+*}, (8T_{33}^{+*})^2$	$20T_{572}^{+*}$	30720	$[20, 8, 4^3, 3, 1^{14}]$
$[8^2, 3, 1]$	$1T_1, 3T_1^{+*}, (8T_{42}^{+*})^2$	$20T_{957}^{+*}$	829440	$[20, 8, 4^3, 3^4, 1^{11}]$
$[8^2, 3, 1]$	$1T_1, 3T_1^{+*}, (8T_{42}^{+*})^2$	$20T_{1003}^{+*}$	2488320	$[20, 8, 4^3, 3^5, 1^{10}]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{34}^{+*})^2$	$20T_{371}^*$	7680	$[20, 4^3, 3, 2, 1^{14}]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{34}^{+*})^2$	$20T_{557}^*$	30720	$[20, 4^4, 3, 2, 1^{13}]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{41}^{+*})^2$	$20T_{470}^*$	15360	$[20, 8, 4^2, 3, 2, 1^{14}]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{41}^{+*})^2$	$20T_{670}^*$	61440	$[20, 8, 4^3, 3, 2, 1^{13}]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{42}^{+*})^2$	$20T_{956}^*$	829440	$[20, 4^4, 3^4, 2, 1^{10}]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{42}^{+*})^2$	$20T_{1002}^*$	2488320	$[20, 4^4, 3^5, 2, 1^9]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{45}^{+*})^2$	$20T_{982}^*$	1658880	$[20, 8, 4^3, 3^4, 2, 1^{10}]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{45}^{+*})^2$	$20T_{1020}^*$	4976640	$[20, 8, 4^3, 3^5, 2, 1^9]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{47}^{+*})^2$	$20T_{1049}^{+*}$	39813120	$[20, 8, 4^3, 3^5, 2^4, 1^6]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{47}^{+*})^2$	$20T_{1051}^*$	39813120	$[20, 8, 4^3, 3^5, 2^4, 1^6]$
$[8^2, 3, 1]$	$1T_1, 3T_2^*, (8T_{47}^{+*})^2$	$20T_{1055}^*$	79626240	$[20, 8, 4^3, 3^5, 2^5, 1^5]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{63}^{+*}$	$20T_{176}^+$	960	$[20, 16, 3, 1^{17}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{64}^{+*}$	$20T_{175}^+$	960	$[20, 16, 3, 1^{17}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{183}^{+*}$	$20T_{229}^+$	1920	$[20, 16, 3, 2, 1^{16}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{184}^{+*}$	$20T_{227}^+$	1920	$[20, 16, 3, 2, 1^{16}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{185}^{+*}$	$20T_{220}^+$	1920	$[20, 16, 3, 2, 1^{16}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{414}^{+*}$	$20T_{267}^+$	2880	$[20, 16, 3^2, 1^{16}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{419}^{+*}$	$20T_{287}^+$	3840	$[20, 16, 4, 3, 1^{16}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{420}^{+*}$	$20T_{284}^+$	3840	$[20, 16, 4, 3, 1^{16}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1029}^{+*}$	$20T_{453}^+$	11520	$[20, 16, 4, 3^2, 1^{15}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1041}^{+*}$	$20T_{471}^{+*}$	15360	$[20, 16, 4^2, 3, 1^{15}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1492}^{+*}$	$20T_{635}^+$	46080	$[20, 16, 12, 4, 3, 1^{15}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1514}^{+*}$	$20T_{678}^{+*}$	61440	$[20, 16, 4^3, 3, 1^{14}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1545}^{+*}$	$20T_{695}^+$	61440	$[20, 16, 4^3, 3, 1^{14}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1649}^{+*}$	$20T_{753}^+$	92160	$[20, 16, 12, 8, 3, 1^{15}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1749}^{+*}$	$20T_{856}^+$	184320	$[20, 16, 4^3, 3^2, 1^{13}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1749}^{+*}$	$20T_{858}^+$	184320	$[20, 16, 12, 4^2, 3, 1^{14}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1789}^{+*}$	$20T_{912}^+$	368640	$[20, 16, 12, 8, 4, 3, 1^{14}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1875}^{+*}$	$20T_{983}^{+*}$	1658880	$[20, 16, 4^3, 3^4, 1^{11}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1875}^{+*}$	$20T_{1018}^{+*}$	4976640	$[20, 16, 4^3, 3^5, 1^{10}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1904}^{+*}$	$20T_{1019}^+$	4976640	$[20, 16, 12, 4^2, 3^4, 1^{11}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1904}^{+*}$	$20T_{1042}^+$	14929920	$[20, 16, 12, 4^2, 3^5, 1^{10}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1918}^{+*}$	$20T_{1035}^+$	9953280	$[20, 16, 12, 8, 4, 3^4, 1^{11}]$
$[16, 3, 1]$	$1T_1, 3T_1^{+*}, 16T_{1918}^{+*}$	$20T_{1048}^+$	29859840	$[20, 16, 12, 8, 4, 3^5, 1^{10}]$
$[16, 3, 1]$	$1T_1, 3T_2^*, 16T_{62}^{+*}$	$20T_{173}^*$	960	$[20, 8, 3, 2, 1^{16}]$
$[16, 3, 1]$	$1T_1, 3T_2^*, 16T_{194}^{+*}$	$20T_{217}^*$	1920	$[20, 16, 3, 2, 1^{16}]$
$[16, 3, 1]$	$1T_1, 3T_2^*, 16T_{195}^{+*}$	$20T_{221}^*$	1920	$[20, 16, 3, 2, 1^{16}]$
$[16, 3, 1]$	$1T_1, 3T_2^*, 16T_{430}^{+*}$	$20T_{273}^*$	3840	$[20, 16, 3, 2^2, 1^{15}]$
$[16, 3, 1]$	$1T_1, 3T_2^*, 16T_{431}^{+*}$	$20T_{276}^*$	3840	$[20, 16, 3, 2^2, 1^{15}]$
$[16, 3, 1]$	$1T_1, 3T_2^*, 16T_{432}^{+*}$	$20T_{282}^*$	3840	$[20, 8, 4, 3, 2, 1^{15}]$
$[16, 3, 1]$	$1T_1, 3T_2^*, 16T_{433}^{+*}$	$20T_{274}^*$	3840	$[20, 16, 3, 2^2, 1^{15}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{436}^{+*}$	$20T_{278}$	3840	$[20, 16, 3, 2^2, 1^{15}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{710}^{+*}$	$20T_{358}$	5760	$[20, 16, 3^2, 2, 1^{15}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{745}^{+*}$	$20T_{367}$	7680	$[20, 16, 4, 3, 2, 1^{15}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{746}^{+*}$	$20T_{376}$	7680	$[20, 16, 4, 3, 2, 1^{15}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1065}^{+*}$	$20T_{472}^*$	15360	$[20, 8, 4^2, 3, 2, 1^{14}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1297}^{+*}$	$20T_{532}$	23040	$[20, 16, 4, 3^2, 2, 1^{14}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1300}^{+*}$	$20T_{559}$	30720	$[20, 16, 4^2, 3, 2, 1^{14}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1529}^{+*}$	$20T_{683}^*$	61440	$[20, 8, 4^3, 3, 2, 1^{13}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1650}^{+*}$	$20T_{754}$	92160	$[20, 16, 12, 4, 3, 2, 1^{14}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1652}^{+*}$	$20T_{752}$	92160	$[20, 16, 12, 4, 3, 2, 1^{14}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1662}^{+*}$	$20T_{811}^*$	122880	$[20, 16, 4^3, 3, 2, 1^{13}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1690}^{+*}$	$20T_{809}$	122880	$[20, 16, 4^3, 3, 2, 1^{13}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1750}^{+*}$	$20T_{855}$	184320	$[20, 16, 12, 8, 3, 2, 1^{14}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1790}^{+*}$	$20T_{918}$	368640	$[20, 16, 12, 4^2, 3, 2, 1^{13}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1797}^{+*}$	$20T_{921}$	368640	$[20, 16, 12, 4^2, 3, 2, 1^{13}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1797}^{+*}$	$20T_{922}$	368640	$[20, 16, 4^3, 3^2, 2, 1^{12}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1834}^{+*}$	$20T_{950}$	737280	$[20, 16, 12, 8, 4, 3, 2, 1^{13}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1875}^{+*}$	$20T_{984}^*$	1658880	$[20, 8, 4^3, 3^4, 2, 1^{10}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1875}^{+*}$	$20T_{1017}^*$	4976640	$[20, 8, 4^3, 3^5, 2, 1^9]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1893}^{+*}$	$20T_{1005}^*$	3317760	$[20, 16, 4^3, 3^4, 2, 1^{10}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1893}^{+*}$	$20T_{1032}^*$	9953280	$[20, 16, 4^3, 3^5, 2, 1^9]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1917}^{+*}$	$20T_{1034}$	9953280	$[20, 16, 12, 4^2, 3^4, 2, 1^{10}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1917}^{+*}$	$20T_{1047}$	29859840	$[20, 16, 12, 4^2, 3^5, 2, 1^9]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1920}^{+*}$	$20T_{1033}$	9953280	$[20, 16, 12, 4^2, 3^4, 2, 1^{10}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1920}^{+*}$	$20T_{1046}$	29859840	$[20, 16, 12, 4^2, 3^5, 2, 1^9]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1929}^{+*}$	$20T_{1044}$	19906560	$[20, 16, 12, 8, 4, 3^4, 2, 1^{10}]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1929}^{+*}$	$20T_{1054}$	59719680	$[20, 16, 12, 8, 4, 3^5, 2, 1^9]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1932}^*$	$20T_{1056}^*$	79626240	$[20, 16, 4^3, 3^5, 2^4, 1^6]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1932}^*$	$20T_{1057}^{+*}$	79626240	$[20, 16, 4^3, 3^5, 2^4, 1^6]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1932}^*$	$20T_{1067}^*$	159252480	$[20, 16, 4^3, 3^5, 2^5, 1^5]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1941}^*$	$20T_{1076}^+$	238878720	$[20, 16, 12, 4^2, 3^5, 2^4, 1^6]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1941}^*$	$20T_{1089}$	477757440	$[20, 16, 12, 4^2, 3^5, 2^5, 1^5]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1947}^*$	$20T_{1090}^+$	477757440	$[20, 16, 12, 8, 4, 3^5, 2^4, 1^6]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1947}^*$	$20T_{1091}$	477757440	$[20, 16, 12, 8, 4, 3^5, 2^4, 1^6]$
[16, 3, 1]	$1T_1, 3T_2^*, 16T_{1947}^*$	$20T_{1101}$	955514880	$[20, 16, 12, 8, 4, 3^5, 2^5, 1^5]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{102}^*$	400	$[20, 5, 4, 1^{17}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{107}^{+*}$	400	$[20, 5, 4, 1^{17}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{231}^{+*}$	2000	$[20, 5^2, 4, 1^{16}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{232}^*$	2000	$[20, 5^2, 4, 1^{16}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{377}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{379}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{381}^*$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{382}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{383}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{384}^*$	10000	$[20, 5^3, 4, 1^{15}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

⇒

## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{385}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{387}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{389}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{390}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{392}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{393}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{399}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{400}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{402}^{+*}$	10000	$[20, 5^3, 4, 1^{15}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{477}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{478}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{481}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{485}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{488}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{491}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{492}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{495}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{496}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{497}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{498}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{499}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{501}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{502}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{504}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{507}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{508}^{+*}$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{575}^{+*}$	40000	$[20, 5^3, 4^2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{579}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{581}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{582}^{+*}$	40000	$[20, 5^3, 4^2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{585}^{+*}$	40000	$[20, 5^3, 4^2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{586}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{590}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{593}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{594}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{596}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{597}^{+*}$	40000	$[20, 5^3, 4^2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{598}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{599}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{601}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{603}^{+*}$	40000	$[20, 5^3, 4^2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{604}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{605}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{607}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{610}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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## Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{611}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{616}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{619}^{+*}$	40000	$[20, 5^3, 4^2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{620}^{+*}$	40000	$[20, 5^3, 4^2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{621}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{622}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{623}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{626}^{+*}$	40000	$[20, 5^3, 4^2, 1^{14}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{627}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{628}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{629}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{630}^{+*}$	40000	$[20, 5^3, 4, 2^2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{699}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{702}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{704}^{+*}$	80000	$[20, 5^3, 4, 2^3, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{706}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{707}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{708}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{709}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{710}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{712}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{720}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{721}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{727}^{+*}$	80000	$[20, 5^3, 4, 2^3, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{728}^{+*}$	80000	$[20, 5^3, 4, 2^3, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{729}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{730}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{731}^{+*}$	80000	$[20, 5^3, 4, 2^3, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{734}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{735}^{+*}$	80000	$[20, 5^3, 4, 2^3, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{736}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{741}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{742}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{743}^{+*}$	80000	$[20, 5^3, 4, 2^3, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{744}^{+*}$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{814}^{+*}$	160000	$[20, 5^3, 4^2, 2^2, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{815}^{+*}$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{816}^{+*}$	160000	$[20, 5^3, 4^2, 2^2, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{818}^{+*}$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{820}^{+*}$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{823}^{+*}$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{825}^{+*}$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{827}^{+*}$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{828}^{+*}$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{834}^{+*}$	160000	$[20, 5^3, 4^2, 2^2, 1^{12}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{836}^{+*}$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{837}^{+*}$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{840}^*$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{841}^{+*}$	160000	$[20, 5^3, 4^3, 1^{13}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{843}^{+*}$	160000	$[20, 5^3, 4^2, 2^2, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{893}^{+*}$	320000	$[20, 5^3, 4^3, 2, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{897}^*$	320000	$[20, 5^3, 4^3, 2, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{899}^*$	320000	$[20, 5^3, 4^3, 2, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{902}^{+*}$	320000	$[20, 5^3, 4^3, 2, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{944}^*$	640000	$[20, 5^3, 4^4, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_1^*, (5T_3^*)^3$	$20T_{945}^*$	640000	$[20, 5^3, 4^4, 1^{12}]$
$[5^3, 4, 1]$	$1T_1, 4T_4^{+*}, (5T_4^+)^3$	$20T_{1052}$	51840000	$[20, 5^3, 4^4, 3^4, 1^8]$
$[5^3, 4, 1]$	$1T_1, 4T_4^{+*}, (5T_4^+)^3$	$20T_{1053}^+$	51840000	$[20, 5^3, 4^4, 3^4, 1^8]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1059}^+$	103680000	$[20, 5^3, 4^4, 3^4, 2, 1^7]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1061}$	103680000	$[20, 5^3, 4^4, 3^4, 2, 1^7]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1062}^+$	103680000	$[20, 5^3, 4^4, 3^4, 2, 1^7]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1063}^+$	103680000	$[20, 5^3, 4^4, 3^4, 2, 1^7]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1064}^+$	103680000	$[20, 5^3, 4^4, 3^4, 2, 1^7]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1065}^+$	103680000	$[20, 5^3, 4^4, 3^4, 2, 1^7]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1069}^+$	207360000	$[20, 5^3, 4^4, 3^4, 2^2, 1^6]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1070}$	207360000	$[20, 5^3, 4^4, 3^4, 2^2, 1^6]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1071}^+$	207360000	$[20, 5^3, 4^4, 3^4, 2^2, 1^6]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1074}^+$	207360000	$[20, 5^3, 4^4, 3^4, 2^2, 1^6]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1084}^+$	414720000	$[20, 5^3, 4^4, 3^4, 2^3, 1^5]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1085}$	414720000	$[20, 5^3, 4^4, 3^4, 2^3, 1^5]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1086}$	414720000	$[20, 5^3, 4^4, 3^4, 2^3, 1^5]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1087}^+$	414720000	$[20, 5^3, 4^4, 3^4, 2^3, 1^5]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1095}$	829440000	$[20, 5^3, 4^4, 3^4, 2^4, 1^4]$
$[5^3, 4, 1]$	$1T_1, 4T_5^*, (5T_5^*)^3$	$20T_{1099}$	829440000	$[20, 5^3, 4^4, 3^4, 2^4, 1^4]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_5^*$	$20T_{169}^*$	800	$[20, 10, 4, 1^{17}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_9^*$	$20T_{484}^*$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_9^*$	$20T_{487}^*$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{10}^*$	$20T_{235}^*$	2000	$[20, 5^2, 4, 1^{16}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{10}^*$	$20T_{236}^*$	2000	$[20, 5^2, 4, 1^{16}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{10}^*$	$20T_{388}^*$	10000	$[20, 5^3, 4, 1^{15}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{10}^*$	$20T_{394}^*$	10000	$[20, 5^3, 4, 1^{15}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{10}^*$	$20T_{397}^*$	10000	$[20, 5^3, 4, 1^{15}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{10}^*$	$20T_{401}^*$	10000	$[20, 5^3, 4, 1^{15}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{10}^*$	$20T_{494}^*$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{10}^*$	$20T_{505}^*$	20000	$[20, 5^3, 4, 2, 1^{14}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{292}^*$	4000	$[20, 10, 5, 4, 1^{16}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{474}^*$	20000	$[20, 10, 5^2, 4, 1^{15}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{480}^*$	20000	$[20, 10, 5^2, 4, 1^{15}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{482}^*$	20000	$[20, 10, 5^2, 4, 1^{15}]$
$[10, 5, 4, 1]$	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{483}^*$	20000	$[20, 10, 5^2, 4, 1^{15}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees





Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{490}^*$	20000	[20, 10, 5 <sup>2</sup> , 4, 1 <sup>15</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{493}^*$	20000	[20, 5 <sup>3</sup> , 4, 2, 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{503}^*$	20000	[20, 10, 5 <sup>2</sup> , 4, 1 <sup>15</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{509}^*$	20000	[20, 5 <sup>3</sup> , 4, 2, 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{578}^*$	40000	[20, 10, 5 <sup>2</sup> , 4, 2, 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{587}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{589}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{592}^*$	40000	[20, 10, 5 <sup>2</sup> , 4, 2, 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{595}^*$	40000	[20, 10, 5 <sup>2</sup> , 4, 2, 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{600}^*$	40000	[20, 10, 5 <sup>2</sup> , 4, 2, 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{618}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{624}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{718}^*$	80000	[20, 5 <sup>3</sup> , 4 <sup>2</sup> , 2, 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{17}^*$	$20T_{726}^*$	80000	[20, 10, 5 <sup>2</sup> , 4 <sup>2</sup> , 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{18}^{+*}$	$20T_{732}^{+*}$	80000	[20, 5 <sup>3</sup> , 4 <sup>2</sup> , 2, 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{18}^{+*}$	$20T_{739}^{+*}$	80000	[20, 10, 5 <sup>2</sup> , 4 <sup>2</sup> , 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{19}^*$	$20T_{574}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{19}^*$	$20T_{577}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{19}^*$	$20T_{602}^*$	40000	[20, 10, 5 <sup>2</sup> , 4, 2, 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{19}^*$	$20T_{617}^*$	40000	[20, 10, 5 <sup>2</sup> , 4, 2, 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{19}^*$	$20T_{705}^*$	80000	[20, 10, 5 <sup>2</sup> , 4 <sup>2</sup> , 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{19}^*$	$20T_{737}^*$	80000	[20, 5 <sup>3</sup> , 4 <sup>2</sup> , 2, 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{20}^*$	$20T_{576}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{20}^*$	$20T_{580}^*$	40000	[20, 10, 5 <sup>2</sup> , 4, 2, 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{20}^*$	$20T_{584}^*$	40000	[20, 10, 5 <sup>2</sup> , 4, 2, 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{20}^*$	$20T_{588}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{20}^*$	$20T_{703}^*$	80000	[20, 5 <sup>3</sup> , 4 <sup>2</sup> , 2, 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{20}^*$	$20T_{716}^*$	80000	[20, 10, 5 <sup>2</sup> , 4 <sup>2</sup> , 1 <sup>14</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{21}^*$	$20T_{583}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{21}^*$	$20T_{591}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{21}^*$	$20T_{608}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{21}^*$	$20T_{612}^*$	40000	[20, 5 <sup>3</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{21}^*$	$20T_{713}^*$	80000	[20, 5 <sup>3</sup> , 4, 2 <sup>3</sup> , 1 <sup>12</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{696}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{697}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{700}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{701}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{711}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{715}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{717}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{719}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{723}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{724}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{725}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{733}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{738}^*$	80000	[20, 10, 5 <sup>2</sup> , 4, 2 <sup>2</sup> , 1 <sup>13</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees



Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{740}^*$	80000	$[20, 10, 5^2, 4, 2^2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{819}^*$	160000	$[20, 10, 5^2, 4^2, 2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{821}^*$	160000	$[20, 10, 5^2, 4^2, 2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{822}^*$	160000	$[20, 10, 5^2, 4^2, 2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{824}^*$	160000	$[20, 10, 5^2, 4^2, 2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{829}^*$	160000	$[20, 10, 5^2, 4^2, 2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{830}^{+*}$	160000	$[20, 10, 5^2, 4, 2^3, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{831}^{+*}$	160000	$[20, 10, 5^2, 4, 2^3, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{835}^*$	160000	$[20, 10, 5^2, 4^2, 2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{838}^*$	160000	$[20, 10, 5^2, 4, 2^3, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{842}^*$	160000	$[20, 10, 5^2, 4, 2^3, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{889}^{+*}$	320000	$[20, 5^3, 4^3, 2, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{27}^*$	$20T_{891}^*$	320000	$[20, 10, 5^2, 4^2, 2^2, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{28}^{+*}$	$20T_{698}^*$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{28}^{+*}$	$20T_{714}^*$	80000	$[20, 5^3, 4^2, 2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{28}^{+*}$	$20T_{813}^*$	160000	$[20, 5^3, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{28}^{+*}$	$20T_{817}^{+*}$	160000	$[20, 10, 5^2, 4^2, 2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{28}^{+*}$	$20T_{826}^*$	160000	$[20, 5^3, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{28}^{+*}$	$20T_{832}^{+*}$	160000	$[20, 10, 5^2, 4^2, 2, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{28}^{+*}$	$20T_{833}^*$	160000	$[20, 5^3, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{28}^{+*}$	$20T_{839}^*$	160000	$[20, 5^3, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{28}^{+*}$	$20T_{892}^{+*}$	320000	$[20, 10, 5^2, 4^2, 2^2, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{28}^{+*}$	$20T_{901}^*$	320000	$[20, 5^3, 4^3, 2, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{890}^*$	320000	$[20, 10, 5^2, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{894}^*$	320000	$[20, 10, 5^2, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{895}^*$	320000	$[20, 10, 5^2, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{896}^*$	320000	$[20, 10, 5^2, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{898}^*$	320000	$[20, 10, 5^2, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{900}^*$	320000	$[20, 10, 5^2, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{903}^*$	320000	$[20, 10, 5^2, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{904}^*$	320000	$[20, 10, 5^2, 4^3, 1^{13}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{940}^*$	640000	$[20, 10, 5^2, 4^3, 2, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{941}^{+*}$	640000	$[20, 10, 5^2, 4^3, 2, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{942}^*$	640000	$[20, 10, 5^2, 4^3, 2, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{943}^*$	640000	$[20, 10, 5^2, 4^3, 2, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_1^*, 5T_3^*, 10T_{33}^*$	$20T_{980}^*$	1280000	$[20, 10, 5^2, 4^4, 1^{12}]$
[10, 5, 4, 1]	$1T_1, 4T_4^{+*}, 5T_4^+, 10T_{40}$	$20T_{1060}$	103680000	$[20, 10, 5^2, 4^4, 3^4, 1^8]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5^*, 10T_{40}$	$20T_{1058}$	103680000	$[20, 5^3, 4^4, 3^4, 2, 1^7]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5^*, 10T_{41}$	$20T_{1068}$	207360000	$[20, 10, 5^2, 4^4, 3^4, 2, 1^7]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5^*, 10T_{41}$	$20T_{1072}^+$	207360000	$[20, 10, 5^2, 4^4, 3^4, 2, 1^7]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5^*, 10T_{41}$	$20T_{1073}^+$	207360000	$[20, 10, 5^2, 4^4, 3^4, 2, 1^7]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5^*, 10T_{41}$	$20T_{1075}$	207360000	$[20, 10, 5^2, 4^4, 3^4, 2, 1^7]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5^*, 10T_{41}$	$20T_{1082}$	414720000	$[20, 10, 5^2, 4^4, 3^4, 2^2, 1^6]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5^*, 10T_{41}$	$20T_{1088}^+$	414720000	$[20, 5^3, 4^4, 3^4, 2^3, 1^5]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5^*, 10T_{42}^+$	$20T_{1081}$	414720000	$[20, 5^3, 4^4, 3^4, 2^3, 1^5]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

⇒

Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5, 10T_{42}^+$	$20T_{1083}^+$	414720000	$[20, 10, 5^2, 4^4, 3^4, 2^2, 1^6]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5, 10T_{43}$	$20T_{1094}^+$	829440000	$[20, 10, 5^2, 4^4, 3^4, 2^3, 1^5]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5, 10T_{43}$	$20T_{1096}^+$	829440000	$[20, 10, 5^2, 4^4, 3^4, 2^3, 1^5]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5, 10T_{43}$	$20T_{1097}^+$	829440000	$[20, 10, 5^2, 4^4, 3^4, 2^3, 1^5]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5, 10T_{43}$	$20T_{1098}^+$	829440000	$[20, 10, 5^2, 4^4, 3^4, 2^3, 1^5]$
[10, 5, 4, 1]	$1T_1, 4T_5^*, 5T_5, 10T_{43}$	$20T_{1103}^+$	1658880000	$[20, 10, 5^2, 4^4, 3^4, 2^4, 1^4]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{17}^{+*}$	$20T_{360}^*$	6000	$[20, 15, 5, 4, 1^{16}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{19}^*$	$20T_{359}^{+*}$	6000	$[20, 15, 5, 4, 1^{16}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{27}^*$	$20T_{454}^*$	12000	$[20, 15, 10, 4, 1^{16}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{37}^{+*}$	$20T_{550}^*$	30000	$[20, 15, 5^2, 4, 1^{15}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{37}^{+*}$	$20T_{553}^*$	30000	$[20, 15, 5^2, 4, 1^{15}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{38}^*$	$20T_{551}^{+*}$	30000	$[20, 15, 5^2, 4, 1^{15}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{38}^*$	$20T_{554}^{+*}$	30000	$[20, 15, 5^2, 4, 1^{15}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{49}^*$	$20T_{660}^*$	60000	$[20, 15, 10, 5, 4, 1^{15}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{49}^*$	$20T_{662}^*$	60000	$[20, 15, 5^2, 4, 2, 1^{14}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{58}^{+*}$	$20T_{782}^*$	120000	$[20, 15, 5^2, 4, 2^2, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{58}^{+*}$	$20T_{785}^*$	120000	$[20, 15, 5^2, 4, 2^2, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{58}^{+*}$	$20T_{881}^*$	240000	$[20, 15, 5^2, 4, 2^3, 1^{12}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{59}^*$	$20T_{783}^{+*}$	120000	$[20, 15, 5^2, 4, 2^2, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{59}^*$	$20T_{787}^{+*}$	120000	$[20, 15, 5^2, 4, 2^2, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{59}^*$	$20T_{789}^{+*}$	120000	$[20, 15, 5^2, 4, 2^2, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{59}^*$	$20T_{878}^{+*}$	240000	$[20, 15, 5^2, 4, 2^3, 1^{12}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{59}^*$	$20T_{883}^{+*}$	240000	$[20, 15, 5^2, 4, 2^3, 1^{12}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{68}^*$	$20T_{877}^*$	240000	$[20, 15, 10, 5, 4, 2^2, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{68}^*$	$20T_{879}^*$	240000	$[20, 15, 10, 5, 4, 2^2, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{68}^*$	$20T_{880}^*$	240000	$[20, 15, 10, 5, 4, 2^2, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{68}^*$	$20T_{884}^*$	240000	$[20, 15, 10, 5, 4, 2^2, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{68}^*$	$20T_{931}^{+*}$	480000	$[20, 15, 5^2, 4^2, 2^2, 1^{12}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{68}^*$	$20T_{932}^*$	480000	$[20, 15, 10, 5, 4, 2^3, 1^{12}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{75}^*$	$20T_{930}^{+*}$	480000	$[20, 15, 5^2, 4^3, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{75}^*$	$20T_{960}^{+*}$	960000	$[20, 15, 5^2, 4^3, 2, 1^{12}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{75}^*$	$20T_{988}^*$	1920000	$[20, 15, 5^2, 4^4, 1^{12}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{82}^*$	$20T_{959}^*$	960000	$[20, 15, 10, 5, 4^3, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{82}^*$	$20T_{961}^*$	960000	$[20, 15, 10, 5, 4^3, 1^{13}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{82}^*$	$20T_{986}^*$	1920000	$[20, 15, 10, 5, 4^3, 2, 1^{12}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{82}^*$	$20T_{987}^{+*}$	1920000	$[20, 15, 10, 5, 4^3, 2, 1^{12}]$
[15, 4, 1]	$1T_1, 4T_1^*, 15T_{82}^*$	$20T_{1014}^*$	3840000	$[20, 15, 10, 5, 4^4, 1^{12}]$
[15, 4, 1]	$1T_1, 4T_4^{+*}, 15T_{92}^+$	$20T_{1066}^+$	155520000	$[20, 15, 5^2, 4^4, 3^4, 1^8]$
[15, 4, 1]	$1T_1, 4T_4^{+*}, 15T_{96}^*$	$20T_{1078}^*$	311040000	$[20, 15, 10, 5, 4^4, 3^4, 1^8]$
[15, 4, 1]	$1T_1, 4T_5^*, 15T_{94}^+$	$20T_{1080}^*$	311040000	$[20, 15, 5^2, 4^4, 3^4, 2, 1^7]$
[15, 4, 1]	$1T_1, 4T_5^*, 15T_{95}^*$	$20T_{1077}^+$	311040000	$[20, 15, 5^2, 4^4, 3^4, 2, 1^7]$
[15, 4, 1]	$1T_1, 4T_5^*, 15T_{95}^*$	$20T_{1079}^+$	311040000	$[20, 15, 5^2, 4^4, 3^4, 2, 1^7]$
[15, 4, 1]	$1T_1, 4T_5^*, 15T_{97}^*$	$20T_{1092}^*$	622080000	$[20, 15, 10, 5, 4^4, 3^4, 2, 1^7]$
[15, 4, 1]	$1T_1, 4T_5^*, 15T_{97}^*$	$20T_{1093}^+$	622080000	$[20, 15, 5^2, 4^4, 3^4, 2^2, 1^6]$
[15, 4, 1]	$1T_1, 4T_5^*, 15T_{101}^*$	$20T_{1102}^+$	1244160000	$[20, 15, 5^2, 4^4, 3^4, 2^3, 1^5]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees



Splitting table of degree 20

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[15, 4, 1]	$1T_1, 4T_5^*, 15T_{101}$	$20T_{1107}$	2488320000	$[20, 15, 5^2, 4^4, 3^4, 2^4, 1^4]$
[15, 4, 1]	$1T_1, 4T_5^*, 15T_{102}$	$20T_{1108}$	2488320000	$[20, 15, 10, 5, 4^4, 3^4, 2^3, 1^5]$
[15, 4, 1]	$1T_1, 4T_5^*, 15T_{102}$	$20T_{1109}^+$	2488320000	$[20, 15, 10, 5, 4^4, 3^4, 2^3, 1^5]$
[15, 4, 1]	$1T_1, 4T_5^*, 15T_{102}$	$20T_{1111}$	4976640000	$[20, 15, 10, 5, 4^4, 3^4, 2^4, 1^4]$
[10, 9, 1]	$1T_1, 9T_9^{+*}, 10T_{26}^+$	$20T_{888}^+$	259200	$[20, 10, 9^2, 4^2, 1^{14}]$
[10, 9, 1]	$1T_1, 9T_{14}^{+*}, 10T_{31}^+$	$20T_{935}^+$	518400	$[20, 10, 9^2, 8, 4, 1^{14}]$
[10, 9, 1]	$1T_1, 9T_{14}^{+*}, 10T_{31}^+$	$20T_{939}^+$	518400	$[20, 10, 9^2, 8, 4, 1^{14}]$
[10, 9, 1]	$1T_1, 9T_{14}^{+*}, 10T_{31}^+$	$20T_{975}^+$	1036800	$[20, 10, 9^2, 8^2, 1^{14}]$
[10, 9, 1]	$1T_1, 9T_{15}^*, 10T_{30}$	$20T_{936}^+$	518400	$[20, 10, 9^2, 8, 4, 1^{14}]$
[10, 9, 1]	$1T_1, 9T_{15}^*, 10T_{30}$	$20T_{938}$	518400	$[20, 10, 9^2, 8, 4, 1^{14}]$
[10, 9, 1]	$1T_1, 9T_{15}^*, 10T_{30}$	$20T_{971}$	1036800	$[20, 10, 9^2, 8^2, 1^{14}]$
[10, 9, 1]	$1T_1, 9T_{16}^*, 10T_{32}$	$20T_{934}^+$	518400	$[20, 10, 9^2, 4^2, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{16}^*, 10T_{32}$	$20T_{937}$	518400	$[20, 10, 9^2, 4^2, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{16}^*, 10T_{32}$	$20T_{973}$	1036800	$[20, 10, 9^2, 4^2, 2^2, 1^{12}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{969}$	1036800	$[20, 10, 9^2, 8, 4, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{970}$	1036800	$[20, 10, 9^2, 8, 4, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{972}^+$	1036800	$[20, 10, 9^2, 8, 4, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{974}$	1036800	$[20, 10, 9^2, 8, 4, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{976}$	1036800	$[20, 10, 9^2, 8, 4, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{977}^+$	1036800	$[20, 10, 9^2, 8, 4, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{978}^+$	1036800	$[20, 10, 9^2, 8, 4, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{996}$	2073600	$[20, 10, 9^2, 8, 4, 2^2, 1^{12}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{997}^+$	2073600	$[20, 10, 9^2, 8^2, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{998}$	2073600	$[20, 10, 9^2, 8^2, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{999}$	2073600	$[20, 10, 9^2, 8^2, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{1000}$	2073600	$[20, 10, 9^2, 8, 4, 2^2, 1^{12}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{1001}$	2073600	$[20, 10, 9^2, 8^2, 2, 1^{13}]$
[10, 9, 1]	$1T_1, 9T_{19}^*, 10T_{35}$	$20T_{1016}$	4147200	$[20, 10, 9^2, 8^2, 2^2, 1^{12}]$
[10, 9, 1]	$1T_1, 9T_{33}^+, 10T_{44}^+$	$20T_{1112}^+$	6584094720000	$[20, 10, 9^2, 8^2, \dots, 3^2, 1^4]$
[10, 9, 1]	$1T_1, 9T_{34}, 10T_{45}$	$20T_{1113}$	13168189440000	$[20, 10, 9^2, 8^2, \dots, 3^2, 2, 1^3]$
[10, 9, 1]	$1T_1, 9T_{34}, 10T_{45}$	$20T_{1114}^+$	13168189440000	$[20, 10, 9^2, 8^2, \dots, 3^2, 2, 1^3]$
[10, 9, 1]	$1T_1, 9T_{34}, 10T_{45}$	$20T_{1115}$	26336378880000	$[20, 10, 9^2, 8^2, \dots, 3^2, 2^2, 1^2]$
[19, 1]	$1T_1, 19T_5^{+*}$	$20T_{272}^+$	3420	$[20, 19, 9, 1^{17}]$
[19, 1]	$1T_1, 19T_6^*$	$20T_{362}$	6840	$[20, 19, 18, 1^{17}]$
[19, 1]	$1T_1, 19T_7^+$	$20T_{1116}^+$	$20! / 2$	$[20, \dots, 3, 1^2]$
[19, 1]	$1T_1, 19T_8$	$20T_{1117}$	$20!$	$[20, \dots, 1]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

## Splitting table of degree 21

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[1^{21}]$	$(1T_1)^{21}$	$21T_1^{+*}$	21	$[21, 1^{20}]$
$[1^{21}]$	$(1T_1)^{21}$	$21T_2^{+*}$	21	$[21, 1^{20}]$
$[2^7, 1^7]$	$(1T_1)^7, (2T_1)^7$	$21T_6^*$	42	$[21, 2, 1^{19}]$
$[7^2, 1^7]$	$(1T_1)^7, (7T_1^{+*})^2$	$21T_{12}^{+*}$	147	$[21, 7, 1^{19}]$
$[7^2, 1^7]$	$(1T_1)^7, (7T_1^{+*})^2$	$21T_{13}^{+*}$	147	$[21, 7, 1^{19}]$
$[7^2, 1^7]$	$(1T_1)^7, (7T_1^{+*})^2$	$21T_{28}^{+*}$	1029	$[21, 7^2, 1^{18}]$
$[14, 1^7]$	$(1T_1)^7, 14T_2^*$	$21T_{18}^*$	294	$[21, 14, 1^{19}]$
$[14, 1^7]$	$(1T_1)^7, 14T_8^*$	$21T_{32}^*$	2058	$[21, 14, 7, 1^{18}]$
$[2^9, 1^3]$	$(1T_1)^3, (2T_1)^9$	$21T_3^*$	42	$[21, 2, 1^{19}]$
$[2^9, 1^3]$	$(1T_1)^3, (2T_1)^9$	$21T_4^*$	42	$[21, 2, 1^{19}]$
$[3^6, 1^3]$	$(1T_1)^3, (3T_1^{+*})^6$	$21T_7^{+*}$	63	$[21, 3, 1^{19}]$
$[3^6, 1^3]$	$(1T_1)^3, (3T_1^{+*})^6$	$21T_{39}^{+*}$	5103	$[21, 3^5, 1^{15}]$
$[3^6, 1^3]$	$(1T_1)^3, (3T_1^{+*})^6$	$21T_{61}^{+*}$	15309	$[21, 3^6, 1^{14}]$
$[6^3, 1^3]$	$(1T_1)^3, (6T_1^*)^3$	$21T_9^*$	126	$[21, 6, 1^{19}]$
$[6^3, 1^3]$	$(1T_1)^3, (6T_5^*)^3$	$21T_{52}^*$	10206	$[21, 6, 3^4, 1^{15}]$
$[6^3, 1^3]$	$(1T_1)^3, (6T_5^*)^3$	$21T_{76}^*$	30618	$[21, 6, 3^5, 1^{14}]$
$[6^3, 1^3]$	$(1T_1)^3, (6T_7^{+*})^3$	$21T_{22}^+$	504	$[21, 6, 4, 1^{18}]$
$[6^3, 1^3]$	$(1T_1)^3, (6T_{15}^+)^3$	$21T_{44}^+$	7560	$[21, 6, 5, 4, 3, 1^{16}]$
$[6^3, 1^3]$	$(1T_1)^3, (6T_{16}^+)^3$	$21T_{56}^+$	15120	$[21, 6, 5, 4, 3, 2, 1^{15}]$
$[9^2, 1^3]$	$(1T_1)^3, (9T_{17}^{+*})^2$	$21T_{59}^{+*}$	15309	$[21, 9, 3^4, 1^{15}]$
$[9^2, 1^3]$	$(1T_1)^3, (9T_{17}^{+*})^2$	$21T_{60}^{+*}$	15309	$[21, 9, 3^4, 1^{15}]$
$[9^2, 1^3]$	$(1T_1)^3, (9T_{17}^{+*})^2$	$21T_{86}^{+*}$	45927	$[21, 9, 3^5, 1^{14}]$
$[18, 1^3]$	$(1T_1)^3, 18T_{325}^*$	$21T_{77}^*$	30618	$[21, 18, 3^4, 1^{15}]$
$[18, 1^3]$	$(1T_1)^3, 18T_{327}^*$	$21T_{81}^*$	30618	$[21, 18, 3^4, 1^{15}]$
$[18, 1^3]$	$(1T_1)^3, 18T_{453}^*$	$21T_{98}^*$	91854	$[21, 18, 3^5, 1^{14}]$
$[18, 1^3]$	$(1T_1)^3, 18T_{510}^{+*}$	$21T_{104}^+$	122472	$[21, 18, 12, 3^3, 1^{15}]$
$[18, 1^3]$	$(1T_1)^3, 18T_{610}^{+*}$	$21T_{115}^+$	367416	$[21, 18, 12, 3^4, 1^{14}]$
$[18, 1^3]$	$(1T_1)^3, 18T_{791}^+$	$21T_{121}^+$	1837080	$[21, 18, 15, 12, 9, 3, 1^{15}]$
$[18, 1^3]$	$(1T_1)^3, 18T_{847}^+$	$21T_{130}^+$	3674160	$[21, 18, 15, 12, 9, 6, 1^{15}]$
$[18, 1^3]$	$(1T_1)^3, 18T_{856}^+$	$21T_{132}^+$	5511240	$[21, 18, 15, 12, 9, 3^2, 1^{14}]$
$[18, 1^3]$	$(1T_1)^3, 18T_{898}^+$	$21T_{139}^+$	11022480	$[21, 18, 15, 12, 9, 6, 3, 1^{14}]$
$[2^{10}, 1]$	$1T_1, (2T_1)^{10}$	$21T_5^{+*}$	42	$[21, 2, 1^{19}]$
$[4^3, 2^4, 1]$	$1T_1, (2T_1)^4, (4T_2^{+*})^3$	$21T_8^*$	84	$[21, 2^2, 1^{18}]$
$[7^2, 2^3, 1]$	$1T_1, (2T_1)^3, (7T_2^*)^2$	$21T_{16}^*$	294	$[21, 7, 2, 1^{18}]$
$[7^2, 2^3, 1]$	$1T_1, (2T_1)^3, (7T_2^*)^2$	$21T_{19}^*$	294	$[21, 7, 2, 1^{18}]$
$[7^2, 2^3, 1]$	$1T_1, (2T_1)^3, (7T_2^*)^2$	$21T_{31}^*$	2058	$[21, 7^2, 2, 1^{17}]$
$[7^2, 2^3, 1]$	$1T_1, (2T_1)^3, (7T_2^*)^2$	$21T_{36}^{+*}$	4116	$[21, 7^2, 2^2, 1^{16}]$
$[7^2, 2^3, 1]$	$1T_1, (2T_1)^3, (7T_2^*)^2$	$21T_{45}^*$	8232	$[21, 7^2, 2^3, 1^{15}]$
$[14, 2^3, 1]$	$1T_1, (2T_1)^3, 14T_1^*$	$21T_{17}^{+*}$	294	$[21, 7, 2, 1^{18}]$
$[14, 2^3, 1]$	$1T_1, (2T_1)^3, 14T_3^*$	$21T_{23}^*$	588	$[21, 14, 2, 1^{18}]$
$[14, 2^3, 1]$	$1T_1, (2T_1)^3, 14T_8^*$	$21T_{30}^{+*}$	2058	$[21, 7^2, 2, 1^{17}]$
$[14, 2^3, 1]$	$1T_1, (2T_1)^3, 14T_{13}^*$	$21T_{37}^*$	4116	$[21, 14, 7, 2, 1^{17}]$
$[14, 2^3, 1]$	$1T_1, (2T_1)^3, 14T_{20}^*$	$21T_{46}^*$	8232	$[21, 14, 7, 2^2, 1^{16}]$
$[14, 2^3, 1]$	$1T_1, (2T_1)^3, 14T_{20}^*$	$21T_{47}^{+*}$	8232	$[21, 14, 7, 2^2, 1^{16}]$
$[14, 2^3, 1]$	$1T_1, (2T_1)^3, 14T_{20}^*$	$21T_{62}^*$	16464	$[21, 14, 7, 2^3, 1^{15}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

⇒

Splitting table of degree 21

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
$[8, 4^2, 2^2, 1]$	$1T_1, (2T_1)^2, (4T_3^*)^2, 8T_4^{+*}$	$21T_{14}^+$	168	$[21, 2^3, 1^{17}]$
$[3^6, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^6$	$21T_{50}^*$	10206	$[21, 3^5, 2, 1^{14}]$
$[3^6, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^6$	$21T_{80}^*$	30618	$[21, 3^6, 2, 1^{13}]$
$[3^6, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^6$	$21T_{105}^{+*}$	122472	$[21, 3^6, 2^3, 1^{11}]$
$[3^6, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^6$	$21T_{112}^*$	244944	$[21, 3^6, 2^4, 1^{10}]$
$[3^6, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^6$	$21T_{120}^{+*}$	979776	$[21, 3^6, 2^6, 1^8]$
$[3^6, 2, 1]$	$1T_1, 2T_1, (3T_2^*)^6$	$21T_{123}^*$	1959552	$[21, 3^6, 2^7, 1^7]$
$[6^2, 3^2, 2, 1]$	$1T_1, 2T_1, (3T_1^{+*})^2, (6T_1^*)^2$	$21T_{11}^*$	126	$[21, 3, 2, 1^{18}]$
$[6^3, 2, 1]$	$1T_1, 2T_1, (6T_1^*)^3$	$21T_{10}^{+*}$	126	$[21, 3, 2, 1^{18}]$
$[6^3, 2, 1]$	$1T_1, 2T_1, (6T_5^*)^3$	$21T_{51}^{+*}$	10206	$[21, 3^5, 2, 1^{14}]$
$[6^3, 2, 1]$	$1T_1, 2T_1, (6T_5^*)^3$	$21T_{75}^{+*}$	30618	$[21, 3^6, 2, 1^{13}]$
$[6^3, 2, 1]$	$1T_1, 2T_1, (6T_9^*)^3$	$21T_{68}^*$	20412	$[21, 6, 3^4, 2, 1^{14}]$
$[6^3, 2, 1]$	$1T_1, 2T_1, (6T_9^*)^3$	$21T_{93}^*$	61236	$[21, 6, 3^5, 2, 1^{13}]$
$[6^3, 2, 1]$	$1T_1, 2T_1, (6T_{13}^*)^3$	$21T_{122}^*$	1959552	$[21, 6, 3^5, 2^6, 1^8]$
$[6^3, 2, 1]$	$1T_1, 2T_1, (6T_{13}^*)^3$	$21T_{124}^{+*}$	1959552	$[21, 6, 3^5, 2^6, 1^8]$
$[6^3, 2, 1]$	$1T_1, 2T_1, (6T_{13}^*)^3$	$21T_{131}^*$	3919104	$[21, 6, 3^5, 2^7, 1^7]$
$[12, 6, 2, 1]$	$1T_1, 2T_1, 6T_1^*, 12T_2^{+*}$	$21T_{15}^*$	252	$[21, 6, 2, 1^{18}]$
$[12, 6, 2, 1]$	$1T_1, 2T_1, 6T_7^{+*}, 12T_{23}^{+*}$	$21T_{27}^*$	1008	$[21, 6, 4, 2, 1^{17}]$
$[12, 6, 2, 1]$	$1T_1, 2T_1, 6T_{15}^+, 12T_{180}^+$	$21T_{57}^*$	15120	$[21, 6, 5, 4, 3, 2, 1^{15}]$
$[12, 6, 2, 1]$	$1T_1, 2T_1, 6T_{16}^+, 12T_{183}^+$	$21T_{58}^+$	15120	$[21, 6, 5, 4, 3, 2, 1^{15}]$
$[12, 6, 2, 1]$	$1T_1, 2T_1, 6T_{16}^+, 12T_{219}^+$	$21T_{74}^+$	30240	$[21, 6, 5, 4, 3, 2^2, 1^{14}]$
$[9^2, 2, 1]$	$1T_1, 2T_1, (9T_{22}^*)^2$	$21T_{79}^*$	30618	$[21, 9, 3^4, 2, 1^{14}]$
$[9^2, 2, 1]$	$1T_1, 2T_1, (9T_{22}^*)^2$	$21T_{100}^*$	91854	$[21, 9, 3^5, 2, 1^{13}]$
$[9^2, 2, 1]$	$1T_1, 2T_1, 9T_{25}^{+*}, 9T_{28}^*$	$21T_{114}^{+*}$	367416	$[21, 9, 3^5, 2^3, 1^{11}]$
$[9^2, 2, 1]$	$1T_1, 2T_1, (9T_{28}^*)^2$	$21T_{117}^*$	734832	$[21, 9, 3^5, 2^4, 1^{10}]$
$[9^2, 2, 1]$	$1T_1, 2T_1, (9T_{28}^*)^2$	$21T_{127}^{+*}$	2939328	$[21, 9, 3^5, 2^6, 1^8]$
$[9^2, 2, 1]$	$1T_1, 2T_1, (9T_{28}^*)^2$	$21T_{137}^*$	5878656	$[21, 9, 3^5, 2^7, 1^7]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{323}^*$	$21T_{78}^*$	30618	$[21, 9, 3^4, 2, 1^{14}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{408}^*$	$21T_{92}^*$	61236	$[21, 18, 3^4, 2, 1^{14}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{453}^*$	$21T_{99}^{+*}$	91854	$[21, 9, 3^5, 2, 1^{13}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{532}^*$	$21T_{107}^*$	183708	$[21, 18, 3^5, 2, 1^{13}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{580}^{+*}$	$21T_{111}^*$	244944	$[21, 18, 12, 3^3, 2, 1^{14}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{621}^*$	$21T_{113}^+$	367416	$[21, 18, 3^5, 2^2, 1^{12}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{678}^*$	$21T_{119}^*$	734832	$[21, 18, 6, 3^4, 2^2, 1^{12}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{679}^{+*}$	$21T_{118}^*$	734832	$[21, 18, 12, 3^4, 2, 1^{13}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{822}^*$	$21T_{125}^+$	2939328	$[21, 18, 12, 3^4, 2^3, 1^{11}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{833}^*$	$21T_{126}^+$	2939328	$[21, 18, 12, 3^4, 2^3, 1^{11}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{848}^*$	$21T_{129}^+$	3674160	$[21, 18, 15, 12, 9, 3, 2, 1^{14}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{849}^+$	$21T_{128}^*$	3674160	$[21, 18, 15, 12, 9, 3, 2, 1^{14}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{857}^*$	$21T_{133}^*$	5878656	$[21, 18, 3^5, 2^6, 1^8]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{857}^*$	$21T_{134}^{+*}$	5878656	$[21, 18, 3^5, 2^6, 1^8]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{857}^*$	$21T_{142}^*$	11757312	$[21, 18, 3^5, 2^7, 1^7]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{862}^*$	$21T_{135}^*$	5878656	$[21, 18, 12, 3^4, 2^4, 1^{10}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{863}^*$	$21T_{136}^*$	5878656	$[21, 18, 12, 3^4, 2^4, 1^{10}]$
$[18, 2, 1]$	$1T_1, 2T_1, 18T_{886}^*$	$21T_{138}^*$	7348320	$[21, 18, 15, 12, 9, 6, 2, 1^{14}]$

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

$\Rightarrow$

## Splitting table of degree 21

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[18, 2, 1]	$1T_1, 2T_1, 18T_{899}$	$21T_{141}^+$	11022480	[21, 18, 15, 12, 9, 3 <sup>2</sup> , 2, 1 <sup>13</sup> ]
[18, 2, 1]	$1T_1, 2T_1, 18T_{900}^+$	$21T_{140}$	11022480	[21, 18, 15, 12, 9, 3 <sup>2</sup> , 2, 1 <sup>13</sup> ]
[18, 2, 1]	$1T_1, 2T_1, 18T_{925}$	$21T_{144}$	22044960	[21, 18, 15, 12, 9, 6, 3, 2, 1 <sup>13</sup> ]
[18, 2, 1]	$1T_1, 2T_1, 18T_{930}^*$	$21T_{145}^+$	23514624	[21, 18, 12, 3 <sup>4</sup> , 2 <sup>6</sup> , 1 <sup>8</sup> ]
[18, 2, 1]	$1T_1, 2T_1, 18T_{930}^*$	$21T_{147}$	47029248	[21, 18, 12, 3 <sup>4</sup> , 2 <sup>7</sup> , 1 <sup>7</sup> ]
[18, 2, 1]	$1T_1, 2T_1, 18T_{960}$	$21T_{148}^+$	352719360	[21, 18, 15, 12, 9, 3 <sup>2</sup> , 2 <sup>6</sup> , 1 <sup>8</sup> ]
[18, 2, 1]	$1T_1, 2T_1, 18T_{960}$	$21T_{151}$	705438720	[21, 18, 15, 12, 9, 3 <sup>2</sup> , 2 <sup>7</sup> , 1 <sup>7</sup> ]
[18, 2, 1]	$1T_1, 2T_1, 18T_{962}$	$21T_{149}$	705438720	[21, 18, 15, 12, 9, 6, 3, 2 <sup>6</sup> , 1 <sup>8</sup> ]
[18, 2, 1]	$1T_1, 2T_1, 18T_{962}$	$21T_{150}^+$	705438720	[21, 18, 15, 12, 9, 6, 3, 2 <sup>6</sup> , 1 <sup>8</sup> ]
[18, 2, 1]	$1T_1, 2T_1, 18T_{962}$	$21T_{152}$	1410877440	[21, 18, 15, 12, 9, 6, 3, 2 <sup>7</sup> , 1 <sup>7</sup> ]
[7 <sup>2</sup> , 3 <sup>2</sup> , 1]	$1T_1, (3T_1^{+*})^2, (7T_3^{+*})^2$	$21T_{21}^{+*}$	441	[21, 7, 3, 1 <sup>18</sup> ]
[7 <sup>2</sup> , 3 <sup>2</sup> , 1]	$1T_1, (3T_1^{+*})^2, (7T_3^{+*})^2$	$21T_{34}^{+*}$	3087	[21, 7 <sup>2</sup> , 3, 1 <sup>17</sup> ]
[7 <sup>2</sup> , 3 <sup>2</sup> , 1]	$1T_1, (3T_1^{+*})^2, (7T_3^{+*})^2$	$21T_{35}^{+*}$	3087	[21, 7 <sup>2</sup> , 3, 1 <sup>17</sup> ]
[7 <sup>2</sup> , 3 <sup>2</sup> , 1]	$1T_1, (3T_1^{+*})^2, (7T_3^{+*})^2$	$21T_{48}^{+*}$	9261	[21, 7 <sup>2</sup> , 3 <sup>2</sup> , 1 <sup>16</sup> ]
[7 <sup>2</sup> , 3 <sup>2</sup> , 1]	$1T_1, (3T_1^{+*})^2, (7T_3^{+*})^2$	$21T_{49}^{+*}$	9261	[21, 7 <sup>2</sup> , 3 <sup>2</sup> , 1 <sup>16</sup> ]
[7 <sup>2</sup> , 3 <sup>2</sup> , 1]	$1T_1, (3T_1^{+*})^2, (7T_3^{+*})^2$	$21T_{73}^{+*}$	27783	[21, 7 <sup>2</sup> , 3 <sup>3</sup> , 1 <sup>15</sup> ]
[14, 3 <sup>2</sup> , 1]	$1T_1, (3T_1^{+*})^2, 14T_4^*$	$21T_{26}^*$	882	[21, 14, 3, 1 <sup>18</sup> ]
[14, 3 <sup>2</sup> , 1]	$1T_1, (3T_1^{+*})^2, 14T_{14}^*$	$21T_{40}^*$	6174	[21, 14, 7, 3, 1 <sup>17</sup> ]
[14, 3 <sup>2</sup> , 1]	$1T_1, (3T_1^{+*})^2, 14T_{26}^*$	$21T_{65}^*$	18522	[21, 14, 7, 3 <sup>2</sup> , 1 <sup>16</sup> ]
[14, 3 <sup>2</sup> , 1]	$1T_1, (3T_1^{+*})^2, 14T_{26}^*$	$21T_{90}^*$	55566	[21, 14, 7, 3 <sup>3</sup> , 1 <sup>15</sup> ]
[8 <sup>2</sup> , 4, 1]	$1T_1, 4T_3^*, (8T_6^*)^2$	$21T_{20}$	336	[21, 8, 2, 1 <sup>18</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{24}^*$	882	[21, 7, 6, 1 <sup>18</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{42}^*$	6174	[21, 7 <sup>2</sup> , 6, 1 <sup>17</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{43}^*$	6174	[21, 7 <sup>2</sup> , 6, 1 <sup>17</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{53}^{+*}$	12348	[21, 7 <sup>2</sup> , 6, 2, 1 <sup>16</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{54}^{+*}$	12348	[21, 7 <sup>2</sup> , 6, 2, 1 <sup>16</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{63}^*$	18522	[21, 7 <sup>2</sup> , 6, 3, 1 <sup>16</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{66}^*$	18522	[21, 7 <sup>2</sup> , 6, 3, 1 <sup>16</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{70}^*$	24696	[21, 7 <sup>2</sup> , 6, 2 <sup>2</sup> , 1 <sup>15</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{71}^*$	24696	[21, 7 <sup>2</sup> , 6, 2 <sup>2</sup> , 1 <sup>15</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{83}^{+*}$	37044	[21, 7 <sup>2</sup> , 6 <sup>2</sup> , 1 <sup>16</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{84}^{+*}$	37044	[21, 7 <sup>2</sup> , 6 <sup>2</sup> , 1 <sup>16</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{89}^*$	55566	[21, 7 <sup>2</sup> , 6, 3 <sup>2</sup> , 1 <sup>15</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{94}^*$	74088	[21, 7 <sup>2</sup> , 6 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{96}^*$	74088	[21, 7 <sup>2</sup> , 6 <sup>2</sup> , 2, 1 <sup>15</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{101}^{+*}$	111132	[21, 7 <sup>2</sup> , 6 <sup>2</sup> , 3, 1 <sup>15</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_1^*, (7T_4^*)^2$	$21T_{109}^*$	222264	[21, 7 <sup>2</sup> , 6 <sup>3</sup> , 1 <sup>15</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_7^{+*}, (7T_5^+)^2$	$21T_{143}^+$	14224896	[21, 7 <sup>2</sup> , 6 <sup>3</sup> , 4 <sup>3</sup> , 1 <sup>12</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_{15}^+, (7T_6^+)^2$	$21T_{153}^+$	48009024000	[21, 7 <sup>2</sup> , 6 <sup>3</sup> , 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 1 <sup>6</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_{16}, (7T_7)^2$	$21T_{154}$	96018048000	[21, 7 <sup>2</sup> , 6 <sup>3</sup> , 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2, 1 <sup>5</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_{16}, (7T_7)^2$	$21T_{158}^+$	192036096000	[21, 7 <sup>2</sup> , 6 <sup>3</sup> , 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2 <sup>2</sup> , 1 <sup>4</sup> ]
[7 <sup>2</sup> , 6, 1]	$1T_1, 6T_{16}, (7T_7)^2$	$21T_{159}$	384072192000	[21, 7 <sup>2</sup> , 6 <sup>3</sup> , 5 <sup>3</sup> , 4 <sup>3</sup> , 3 <sup>3</sup> , 2 <sup>3</sup> , 1 <sup>3</sup> ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_5^*$	$21T_{25}^{+*}$	882	[21, 7, 6, 1 <sup>18</sup> ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_7^*$	$21T_{29}^*$	1764	[21, 14, 6, 1 <sup>18</sup> ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{14}^*$	$21T_{41}^{+*}$	6174	[21, 7 <sup>2</sup> , 6, 1 <sup>17</sup> ]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

⇒

Splitting table of degree 21

$D(G)$	$S(G)$	$G$	$ G $	$\mathcal{L}(G)$
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{24}^*$	$21T_{55}^*$	12348	[21, 14, 7, 6, $1^{17}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{26}^*$	$21T_{64}^{+*}$	18522	[21, $7^2, 6, 3, 1^{16}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{26}^*$	$21T_{88}^{+*}$	55566	[21, $7^2, 6, 3^2, 1^{15}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{32}^*$	$21T_{69}^*$	24696	[21, 14, 7, 6, 2, $1^{16}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{32}^*$	$21T_{72}^{+*}$	24696	[21, 14, 7, 6, 2, $1^{16}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{32}^*$	$21T_{87}^*$	49392	[21, 14, 7, 6, $2^2, 1^{15}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{37}^*$	$21T_{82}^*$	37044	[21, 14, 7, 6, 3, $1^{16}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{37}^*$	$21T_{102}^*$	111132	[21, 14, 7, 6, $3^2, 1^{15}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{45}^*$	$21T_{95}^{+*}$	74088	[21, 14, 7, $6^2, 1^{16}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{45}^*$	$21T_{97}^*$	74088	[21, 14, 7, $6^2, 1^{16}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{45}^*$	$21T_{106}^*$	148176	[21, 14, 7, $6^2, 2, 1^{15}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{45}^*$	$21T_{108}^{+*}$	222264	[21, 14, 7, $6^2, 3, 1^{15}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{45}^*$	$21T_{110}^*$	222264	[21, 14, 7, $6^2, 3, 1^{15}$ ]
[14, 6, 1]	$1T_1, 6T_1^*, 14T_{45}^*$	$21T_{116}^*$	444528	[21, 14, 7, $6^3, 1^{15}$ ]
[14, 6, 1]	$1T_1, 6T_7^{+*}, 14T_{52}$	$21T_{146}$	28449792	[21, 14, 7, $6^3, 4^3, 1^{12}$ ]
[14, 6, 1]	$1T_1, 6T_{15}^+, 14T_{58}$	$21T_{156}$	96018048000	[21, 14, 7, $6^3, 5^3, 4^3, 3^3, 1^6$ ]
[14, 6, 1]	$1T_1, 6T_{16}^+, 14T_{58}$	$21T_{155}^+$	96018048000	[21, $7^2, 6^3, 5^3, 4^3, 3^3, 2, 1^5$ ]
[14, 6, 1]	$1T_1, 6T_{16}^+, 14T_{60}$	$21T_{157}^+$	192036096000	[21, 14, 7, $6^3, 5^3, 4^3, 3^3, 2, 1^5$ ]
[14, 6, 1]	$1T_1, 6T_{16}^+, 14T_{61}$	$21T_{160}^+$	384072192000	[21, 14, 7, $6^3, 5^3, 4^3, 3^3, 2^2, 1^4$ ]
[14, 6, 1]	$1T_1, 6T_{16}^+, 14T_{61}$	$21T_{161}^+$	384072192000	[21, 14, 7, $6^3, 5^3, 4^3, 3^3, 2^2, 1^4$ ]
[14, 6, 1]	$1T_1, 6T_{16}^+, 14T_{61}$	$21T_{162}^+$	768144384000	[21, 14, 7, $6^3, 5^3, 4^3, 3^3, 2^3, 1^3$ ]
[ $10^2, 1$ ]	$1T_1, 10T_{12}, 10T_{13}$	$21T_{33}^+$	2520	[21, 10, 4, 3, $1^{17}$ ]
[ $10^2, 1$ ]	$1T_1, 10T_{13}, 10T_{22}$	$21T_{38}^+$	5040	[21, 10, 4, 3, 2, $1^{16}$ ]
[20, 1]	$1T_1, 20T_{175}^+$	$21T_{67}^+$	20160	[21, 20, 16, 3, $1^{17}$ ]
[20, 1]	$1T_1, 20T_{217}^+$	$21T_{85}^+$	40320	[21, 20, 16, 3, 2, $1^{16}$ ]
[20, 1]	$1T_1, 20T_{267}^+$	$21T_{91}^+$	60480	[21, 20, 16, 9, $1^{17}$ ]
[20, 1]	$1T_1, 20T_{358}^+$	$21T_{103}^+$	120960	[21, 20, 16, 9, 2, $1^{16}$ ]
[20, 1]	$1T_1, 20T_{1116}^+$	$21T_{163}^+$	$21! / 2$	[21, ..., 3, $1^2$ ]
[20, 1]	$1T_1, 20T_{1117}^+$	$21T_{164}^+$	$21!$	[21, ..., 1]

$G$ : Possible Galois Groups,  $D(G)$ : Degrees of factors,  $S(G)$ : Galois Groups of factors,  $\mathcal{L}(G)$ : Initial Degrees

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