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# Degenerate determinant representation of solutions of the NLS equation, higher Peregrine breathers and multi-rogue waves.

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## Abstract

We present a new representation of solutions of the focusing NLS equation as a quotient of two determinants. This work is based on a recent paper in which we have constructed a multi-parametric family of this equation in terms of Wronskians. This formulation was written in terms of a limit involving a parameter.

Here we give a very compact formulation without presence of a limit. This is a completely new result which gives a very efficient procedure to construct families of quasi-rational solutions of the NLS equation. With this method, we construct Peregrine breathers of orders  $N = 4$  to 7 and multi-rogue waves associated by deformation of parameters.

## 1 Introduction

In 1972 Zakharov and Shabat solved the nonlinear Schrödinger equation (NLS) using the inverse scattering method. The case of periodic and almost periodic algebro-geometric solutions to the focusing NLS equation were first constructed in 1976 by Its and Kotlyarov [15]. The first quasi-rational solutions of NLS equation were constructed in 1983 by Peregrine, nowadays called worldwide Peregrine breathers. In 1986 Eleonski, Akhmediev and Kulagin obtained the two-phase almost periodic solution to the NLS equation

and obtained the first higher order analogue of the Peregrine breather[3]. Other families of higher order were constructed in a series of articles by Akhmediev et al. [1, 2] using Darboux transformations.

In 2010, it has been shown in [7] that rational solutions of the NLS equation can be written as a quotient of two Wronskians. With this formulation, it was possible to recover as a particular case, Akhmediev's quasi-rational solution of the NLS equation.

Recently, it has been constructed in [13] a new representation of the solutions of the NLS equation in terms of a ratio of two Wronskians determinants of even order  $2N$  composed of elementary functions; the related solutions of NLS are called of order  $N$ . Quasi-rational solutions of the NLS equation were obtained by the passage to the limit when some parameter tended to 0.

Here we obtain a new representation of quasi-rational solutions of NLS in term of a quotient of two determinants different from preceding works which does not involve Wronskians.

With this method, we obtain very easily solutions of NLS equation with parameters of deformations until order 7. The following orders will be able to be the object of other publications.

These results can be compared with those obtain recently by Akhmediev et al. in [5] with Darboux dressing method and numerical approach.

This method appears to be very efficient without common measurement with the preceding one exposed in [13] and leads to new results about NLS equation.

## **2 Expression of solutions of NLS equation in terms of Wronskian determinant and quasi-rational limit**

### **2.1 Solutions of NLS equation in terms of Wronskian determinant**

We recall results obtained in [13]. We consider the focusing NLS equation

$$iv_t + v_{xx} + 2|v|^2v = 0. \tag{1}$$

From [12], the solution of the NLS equation can be written in the form

$$v(x, t) = \frac{\det(I + A_3(x, t))}{\det(I + A_1(x, t))} \exp(2it - i\varphi). \quad (2)$$

In (2), the matrix  $A_r = (a_{\nu\mu})_{1 \leq \nu, \mu \leq 2N}$  ( $r = 3, 1$ ) is defined by

$$a_{\nu\mu} = (-1)^{\epsilon_\nu} \prod_{\lambda \neq \mu} \left| \frac{\gamma_\lambda + \gamma_\nu}{\gamma_\lambda - \gamma_\mu} \right| \exp(i\kappa_\nu x - 2\delta_\nu t + x_{r,\nu} + e_\nu). \quad (3)$$

$\kappa_\nu, \delta_\nu, \gamma_\nu$  are functions of the parameters  $\lambda_\nu, \nu = 1, \dots, 2N$  satisfying the relations

$$0 < \lambda_j < 1, \quad \lambda_{N+j} = -\lambda_j, \quad 1 \leq j \leq N. \quad (4)$$

They are given by the following equations,

$$\kappa_\nu = 2\sqrt{1 - \lambda_\nu^2}, \quad \delta_\nu = \kappa_\nu \lambda_\nu, \quad \gamma_\nu = \sqrt{\frac{1 - \lambda_\nu}{1 + \lambda_\nu}}, \quad (5)$$

and

$$\kappa_{N+j} = \kappa_j, \quad \delta_{N+j} = -\delta_j, \quad \gamma_{N+j} = 1/\gamma_j, \quad j = 1 \dots N. \quad (6)$$

The terms  $x_{r,\nu}$  ( $r = 3, 1$ ) are defined by

$$x_{r,\nu} = (r - 1) \ln \frac{\gamma_\nu - i}{\gamma_\nu + i}, \quad 1 \leq j \leq 2N. \quad (7)$$

The parameters  $e_\nu$  are defined by

$$e_j = ia_j - b_j, \quad e_{N+j} = ia_j + b_j, \quad 1 \leq j \leq N, \quad (8)$$

where  $a_j$  and  $b_j$ , for  $1 \leq j \leq N$  are arbitrary real numbers.

The terms  $\epsilon_\nu$  are defined by :

$$\begin{aligned} \epsilon_\nu &= 0, & 1 \leq \nu \leq N \\ \epsilon_\nu &= 1, & N + 1 \leq \nu \leq 2N. \end{aligned}$$

We use the following notations :

$$\Theta_{r,\nu} = \kappa_\nu x/2 + i\delta_\nu t - ix_{r,\nu}/2 + \gamma_\nu y - ie_\nu, \quad 1 \leq \nu \leq 2N.$$

We consider the functions

$$\begin{aligned} \phi_{r,\nu}(y) &= \sin \Theta_{r,\nu}, & 1 \leq \nu \leq N, \\ \phi_{r,\nu}(y) &= \cos \Theta_{r,\nu}, & N + 1 \leq \nu \leq 2N. \end{aligned} \quad (9)$$

$W_r(\mathbf{y}) = W(\phi_{r,1}, \dots, \phi_{r,2N})$  is the Wronskian

$$W_r(\mathbf{y}) = \det[(\partial_{\mathbf{y}}^{\mu-1} \phi_{r,\nu})_{\nu, \mu \in [1, \dots, 2N]}]. \quad (10)$$

Then we get the following link between Fredholm and Wronskian determinants [10]

**Proposition 2.1**

$$\det(I + A_r) = k_r(0) \times W_r(\phi_{r,1}, \dots, \phi_{r,2N})(0), \quad (11)$$

where

$$k_r(\mathbf{y}) = \frac{2^{2N} \exp(i \sum_{\nu=1}^{2N} \Theta_{r,\nu})}{\prod_{\nu=2}^{2N} \prod_{\mu=1}^{\nu-1} (\gamma_\nu - \gamma_\mu)}.$$

In (11), the matrix  $A_r$  is defined by (3).

It can be deduced the following result :

**Proposition 2.2** *The function  $v$  defined by*

$$v(x, t) = \frac{W_3(0)}{W_1(0)} \exp(2it - i\varphi). \quad (12)$$

*is solution of the NLS equation (1)*

$$iv_t + v_{xx} + 2|v|^2v = 0.$$

## 2.2 Quasi-rational solutions of NLS equation in terms of a limit of a ratio of Wronskian determinants

In the following, we take the limit when the parameters  $\lambda_j \rightarrow 1$  for  $1 \leq j \leq N$  and  $\lambda_j \rightarrow -1$  for  $N + 1 \leq j \leq 2N$ .

We consider the parameter  $\lambda_j$  written in the form

$$\lambda_j = 1 - 2j^2\epsilon^2, \quad 1 \leq j \leq N. \quad (13)$$

When  $\epsilon$  goes to 0, we realize limited expansions at order  $p$ , for  $1 \leq j \leq N$ , of the terms

$$\begin{aligned} \kappa_j &= 4j\epsilon(1 - \epsilon^2j^2)^{1/2}, \quad \delta_j = 4j\epsilon(1 - 2\epsilon^2j^2)(1 - \epsilon^2j^2)^{1/2}, \\ \gamma_j &= j\epsilon(1 - \epsilon^2j^2)^{-1/2}, \quad x_{r,j} = (r - 1) \ln \frac{1+i\epsilon j(1-\epsilon^2j^2)^{-1/2}}{1-i\epsilon j(1-\epsilon^2j^2)^{-1/2}}, \end{aligned}$$

$\kappa_{N+j} = 4j\epsilon(1 - \epsilon^2 j^2)^{1/2}$ ,  $\delta_{N+j} = -4j\epsilon(1 - 2\epsilon^2 j^2)(1 - \epsilon^2 j^2)^{1/2}$ ,  
 $\gamma_{N+j} = 1/(j\epsilon)(1 - \epsilon^2 j^2)^{1/2}$ ,  $x_{r,N+j} = (r - 1) \ln \frac{1 - i\epsilon j(1 - \epsilon^2 j^2)^{-1/2}}{1 + i\epsilon j(1 - \epsilon^2 j^2)^{-1/2}}$ .  
 The parameters  $a_j$  and  $b_j$ , for  $1 \leq N$  are chosen in the form

$$a_j = \hat{a}_j \epsilon^{2N-1}, \quad b_j = \hat{b}_j \epsilon^{2N-1}, \quad 1 \leq j \leq N. \quad (14)$$

We have the result given in [12] :

**Proposition 2.3** *With the parameters  $\lambda_j$  defined by (13),  $a_j$  and  $b_j$  chosen as in (14), for  $1 \leq j \leq N$ , the function  $v$  defined by*

$$v(x, t) = \exp(2it - i\varphi) \lim_{\epsilon \rightarrow 0} \frac{W_3(0)}{W_1(0)}, \quad (15)$$

is a quasi-rational solution of the NLS equation (1)

$$iv_t + v_{xx} + 2|v|^2 v = 0,$$

depending on  $2N$  parameters  $\tilde{a}_j, \tilde{b}_j, 1 \leq j \leq N$ .

### 3 Expression of solutions of NLS equation in terms of a ratio of two determinants

We construct here solutions of the NLS equation which does not involve Wronskian determinant and a passage to the limit, but which is expressed as a quotient of two determinants.

For this we need the following notations :

$$A_\nu = \kappa_\nu x/2 + i\delta_\nu t - ix_{3,\nu}/2 - ie_\nu/2,$$

$$B_\nu = \kappa_\nu x/2 + i\delta_\nu t - ix_{1,\nu}/2 - ie_\nu/2,$$

for  $1 \leq \nu \leq 2N$ , with  $\kappa_\nu, \delta_\nu, x_{r,\nu}$  defined in (5), (6) and (7).

The parameters  $e_\nu$  are defined by (8). For simplicity of the reduction, we choose  $a_j$  and  $b_j$  in the form

$$a_j = \tilde{a}_1 j^{2N-1} \epsilon^{2N-1}, \quad b_j = \tilde{b}_1 j^{2N-1} \epsilon^{2N-1}, \quad 1 \leq j \leq N. \quad (16)$$

Below we use the following notations :

$$\begin{aligned} f_{4j+1,k} &= \gamma_k^{4j-1} \sin A_k, & f_{4j+2,k} &= \gamma_k^{4j} \cos A_k, \\ f_{4j+3,k} &= -\gamma_k^{4j+1} \sin A_k, & f_{4j+4,k} &= -\gamma_k^{4j+2} \cos A_k, \end{aligned}$$

for  $1 \leq k \leq N$ , and

$$\begin{aligned} f_{4j+1,k} &= \gamma_k^{2N-4j-2} \cos A_k, & f_{4j+2,k} &= -\gamma_k^{2N-4j-3} \sin A_k, \\ f_{4j+3,k} &= -\gamma_k^{2N-4j-4} \cos A_k, & f_{4j+4,k} &= \gamma_k^{2N-4j-5} \sin A_k, \end{aligned}$$

for  $N+1 \leq k \leq 2N$ .

We define the functions  $g_{j,k}$  for  $1 \leq j \leq 2N$ ,  $1 \leq k \leq 2N$  in the same way, we replace only the term  $A_k$  by  $B_k$ .

$$\begin{aligned} g_{4j+1,k} &= \gamma_k^{4j-1} \sin B_k, & g_{4j+2,k} &= \gamma_k^{4j} \cos B_k, \\ g_{4j+3,k} &= -\gamma_k^{4j+1} \sin B_k, & g_{4j+4,k} &= -\gamma_k^{4j+2} \cos B_k, \end{aligned}$$

for  $1 \leq k \leq N$ , and

$$\begin{aligned} g_{4j+1,k} &= \gamma_k^{2N-4j-2} \cos B_k, & g_{4j+2,k} &= -\gamma_k^{2N-4j-3} \sin B_k, \\ g_{4j+3,k} &= -\gamma_k^{2N-4j-4} \cos B_k, & g_{4j+4,k} &= \gamma_k^{2N-4j-5} \sin B_k, \end{aligned}$$

for  $N+1 \leq k \leq 2N$ .

Then it is clear that

$$q(x, t) := \frac{W_3(0)}{W_1(0)}$$

can be written as

$$q(x, t) = \frac{\Delta_3}{\Delta_1} = \frac{\det(f_{j,k})_{j,k \in [1,2N]}}{\det(g_{j,k})_{j,k \in [1,2N]}}. \quad (17)$$

We recall that  $\lambda_j = 1 - 2j\epsilon^2$ . All the functions  $f_{j,k}$  and  $g_{j,k}$  depend on  $\epsilon$ . We use the expansions

$$f_{j,k}(x, t, \epsilon) = \sum_{l=0}^{N-1} \frac{1}{(2l)!} f_{j,1}[l] k^{2l} \epsilon^{2l} + O(\epsilon^{2N}), \quad f_{j,1}[l] = \frac{\partial^{2l} f_{j,1}}{\partial \epsilon^{2l}}(x, t, 0),$$

$$f_{j,1}[0] = f_{j,1}(x, t, 0), \quad 1 \leq j \leq 2N, \quad 1 \leq k \leq N, \quad 1 \leq l \leq N-1,$$

$$f_{j,N+k}(x, t, \epsilon) = \sum_{l=0}^{N-1} \frac{1}{(2l)!} f_{j,N+1}[l] k^{2l} \epsilon^{2l} + O(\epsilon^{2N}), \quad f_{j,N+1}[l] = \frac{\partial^{2l} f_{j,N+1}}{\partial \epsilon^{2l}}(x, t, 0),$$

$$f_{j,N+1}[0] = f_{j,N+1}(x, t, 0), \quad 1 \leq j \leq 2N, \quad 1 \leq k \leq N, \quad 1 \leq l \leq N-1.$$

We have the same expansions for the functions  $g_{j,k}$ .

$$g_{j,k}(x, t, \epsilon) = \sum_{l=0}^{N-1} \frac{1}{(2l)!} g_{j,1}[l] k^{2l} \epsilon^{2l} + O(\epsilon^{2N}), \quad g_{j,1}[l] = \frac{\partial^{2l} g_{j,1}}{\partial \epsilon^{2l}}(x, t, 0),$$

$$g_{j,1}[0] = g_{j,1}(x, t, 0), \quad 1 \leq j \leq 2N, \quad 1 \leq k \leq N, \quad 1 \leq l \leq N-1,$$

$$g_{j,N+k}(x, t, \epsilon) = \sum_{l=0}^{N-1} \frac{1}{(2l)!} g_{j,N+1}[l] k^{2l} \epsilon^{2l} + O(\epsilon^{2N}), \quad g_{j,N+1}[l] = \frac{\partial^{2l} g_{j,N+1}}{\partial \epsilon^{2l}}(x, t, 0),$$

$$g_{j,N+1}[0] = g_{j,N+1}(x, t, 0), \quad 1 \leq j \leq 2N, \quad 1 \leq k \leq N, \quad N+1 \leq k \leq 2N..$$

Combining the columns of the determinants appearing in  $q(x, t)$  successively to eliminate in each column  $k$  (or  $N+k$ ) of them the powers of  $\epsilon$  lower than  $2(k-1)$ , and factorizing and simplifying each common terms,  $q(x, t)$  can be replaced by  $Q(x, t)$

$$Q(x, t) := \begin{vmatrix} f_{1,1}[0] & \cdots & f_{1,1}[N-1] & f_{1,N+1}[0] & \cdots & f_{1,N+1}[N-1] \\ f_{2,1}[0] & \cdots & f_{2,1}[N-1] & f_{2,N+1}[0] & \cdots & f_{2,N+1}[N-1] \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ f_{2N,1}[0] & \cdots & f_{2N,1}[N-1] & f_{2N,N+1}[0] & \cdots & f_{2N,N+1}[N-1] \\ \hline g_{1,1}[0] & \cdots & g_{1,1}[N-1] & g_{1,N+1}[0] & \cdots & g_{1,N+1}[N-1] \\ g_{2,1}[0] & \cdots & g_{2,1}[N-1] & g_{2,N+1}[0] & \cdots & g_{2,N+1}[N-1] \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ g_{2N,1}[0] & \cdots & g_{2N,1}[N-1] & g_{2N,N+1}[0] & \cdots & g_{2N,N+1}[N-1] \end{vmatrix} \quad (18)$$

Then we get the following result :

**Proposition 3.1** *The function  $v$  defined by*

$$v(x, t) = \exp(2it - i\varphi) \times Q(x, t) \quad (19)$$

*is a quasi-rational solution of the NLS equation (1)*

$$iv_t + v_{xx} + 2|v|^2v = 0,$$

*where  $Q(x, t)$  is defined in (18).*



## 4 Quasi-rational solutions of order $N$

We have already constructed in [13] solutions for the cases  $N = 1, 2, 3$ , and this method gives the same results. Here, we recall the case  $N = 3$  and give new solutions of NLS equation in the cases from  $N = 4$  to 7.

Because of the length of the expressions, in the cases  $N = 4$  to 7, for the polynomials  $N$  and  $D$  in the solutions  $v$  of the NLS equation defined by

$$v(x, t) = \frac{N(x, t)}{D(x, t)} \exp(2it - i\varphi),$$

we only give in the appendix.

## 4.1 Case N=3

Here, we give the expression  $v$  of the solution of NLS equation (we denote for the expressions of  $N$  and  $D$ ,  $\tilde{a}_1 = a$  and  $\tilde{b}_1 = b$  for simplicity), defined by

$$v(x, t) = \frac{N(x, t)}{D(x, t)} \exp(2it - i\varphi).$$

$$\begin{aligned} N(x, t) = & -4096x^{12} + (18432 + 98304it - 98304t^2)x^{10} + (1843200t^2 + 1966080it^3 - 368640it - 983040t^4 + 57600)x^8 \\ & + (22609920t^4 - 13762560it^3 - 5242880t^6 - 921600it + 172800 - 2027520t^2 + 15728640it^5)x^6 \\ & + (-226800 + 62914560it^7 - 691200t^2 - 2073600it - 15728640t^8 \\ & - 9216000t^4 - 82575360it^5 + 106168320t^6 - 11059200it^3)x^4 \\ & + (-18403200t^2 + 212336640t^8 - 25165824t^{10} + 85708800t^4 - 38707200it^3 - 56033280t^6 \\ & + 125829120it^9 + 1814400it + 168099840it^5 - 94371840it^7 - 113400)x^2 \\ & + 14175 - 83808000t^4 - 3801600it^3 + 100663296it^{11} + 157286400it^9 + 144703488t^{10} - 2268000t^2 - 342097920it^7 \\ & - 16777216t^{12} + 533790720t^8 - 236666880it^5 + 152616960t^6 + 453600it \end{aligned}$$

$$\begin{aligned} D(x, t) = & 4096x^{12} + (98304t^2 + 6144)x^{10} + (-368640t^2 + 34560 + 983040t^4)x^8 \\ & + (-2949120t^4 + 149760 + 5242880t^6 + 552960t^2)x^6 \\ & + (3456000t^2 + 15728640t^8 + 54000 - 5529600t^4 + 3932160t^6)x^4 \\ & + (25165824t^{10} + 80179200t^4 + 221184000t^6 + 70778880t^8 - 2332800t^2 + 48600)x^2 \\ & + 2025 + 36806400t^4 + 1490400t^2 + 62668800t^6 + 244776960t^8 + 132120576t^{10} + 16777216t^{12} \end{aligned}$$

If we choose  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 0$ , we obtain the classical Akhmediev's breather :

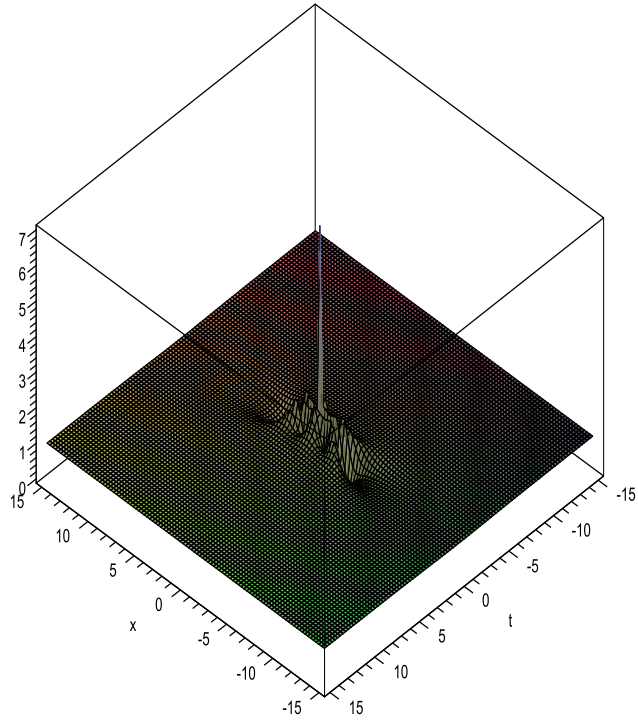


Figure 1: Solution of NLS,  $N=3$ ,  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 0$ .

If we choose  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 10^3$ , we obtain the plot :

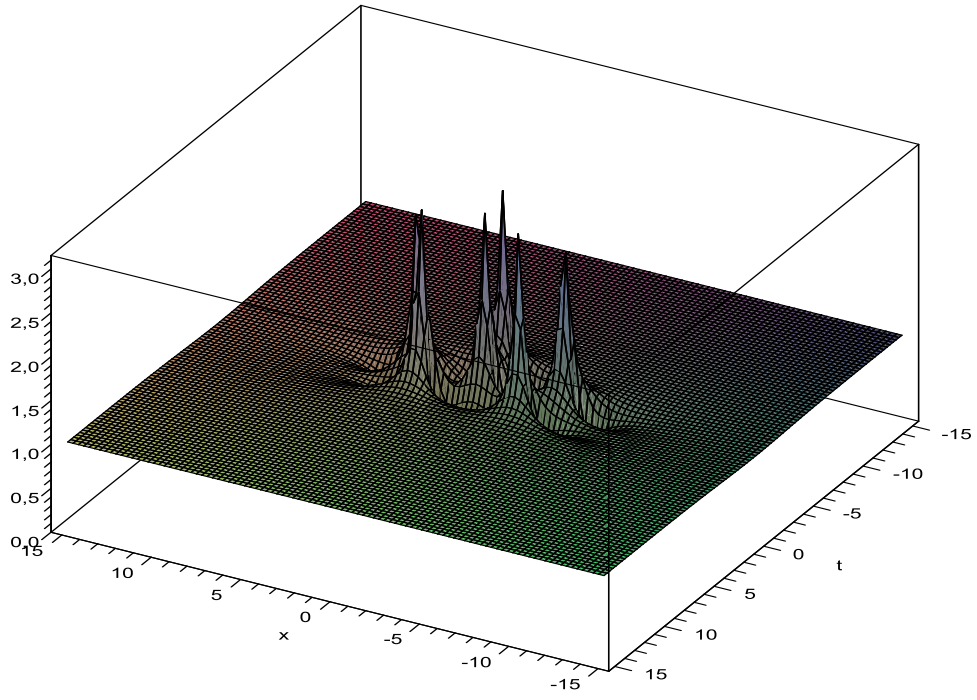


Figure 2: Solution of NLS,  $N=3$ ,  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 10^3$ .

If we choose  $\tilde{a}_1 = 10^6$ ,  $\tilde{b}_1 = -10^2$ , we obtain the regular plot :

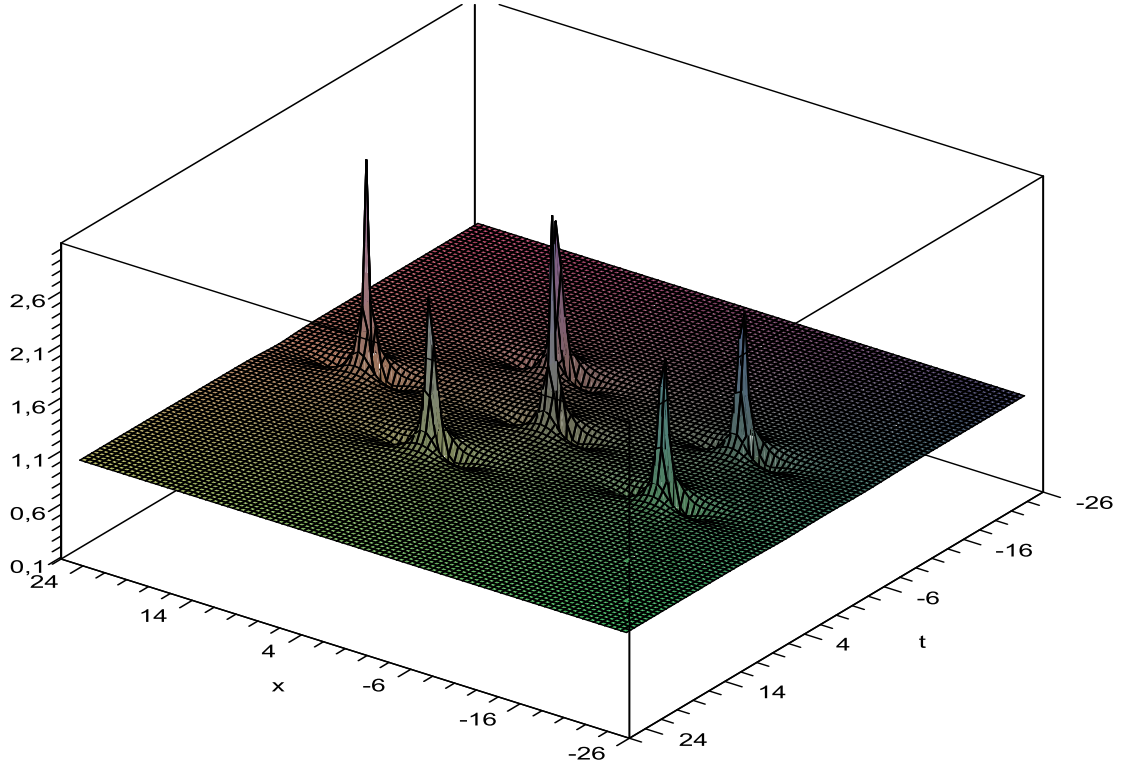


Figure 3: Solution of NLS,  $N=3$ ,  $\tilde{a}_1 = 10^6$ ,  $\tilde{b}_1 = -10^2$ .

## 4.2 Case $N=4$

If we choose  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 0$ , we obtain the classical Akhmediev's breather :

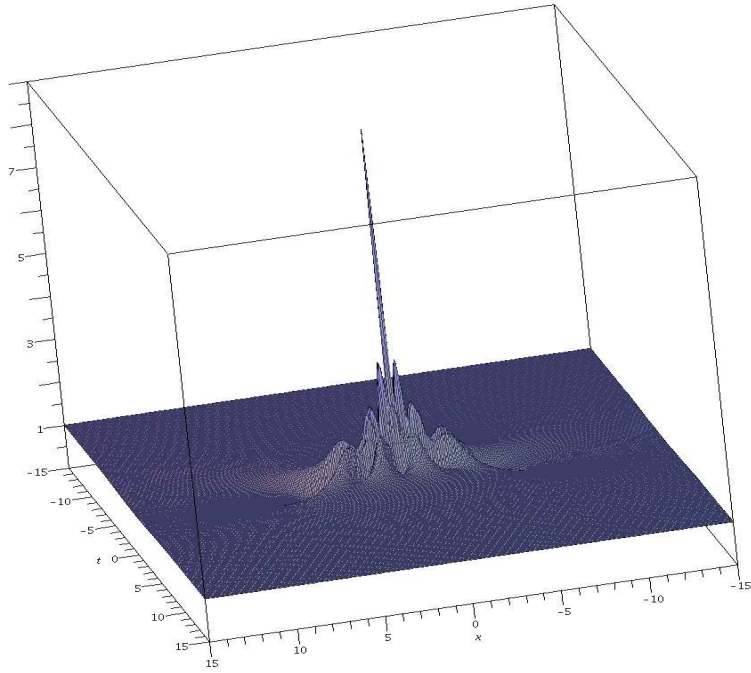


Figure 4: Solution of NLS,  $N=4$ ,  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 0$ .

If we choose  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 10^3$ , we obtain the plot :

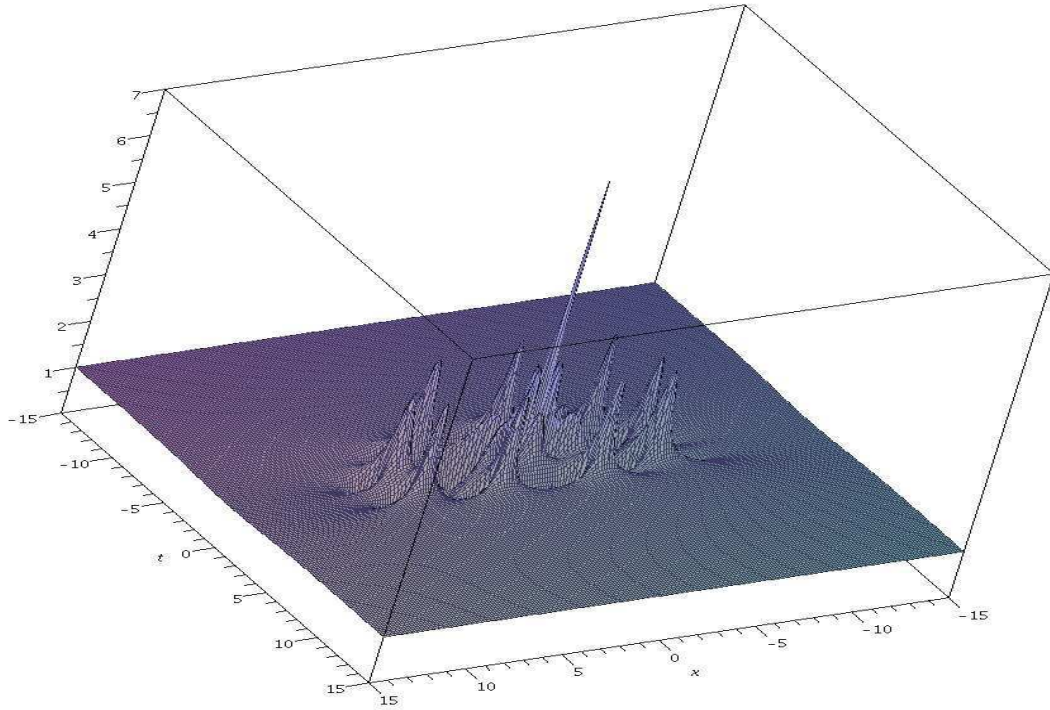


Figure 5: Solution of NLS,  $N=4$ ,  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 10^3$ .

If we choose  $\tilde{a}_1 = 10^6$ ,  $\tilde{b}_1 = -10^2$ , we obtain the regular plot :

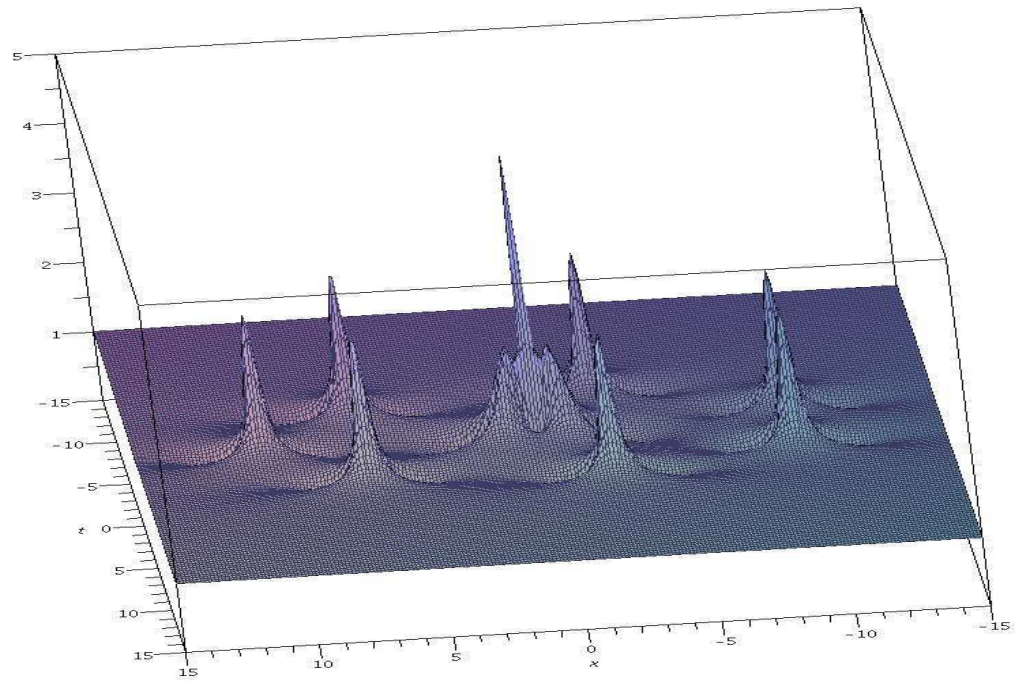


Figure 6: Solution of NLS,  $N=4$ ,  $\tilde{a}_1 = 10^6$ ,  $\tilde{b}_1 = -10^2$ .

### 4.3 Case $N=5$

For  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 0$ , we obtain Akhmediev's breather.



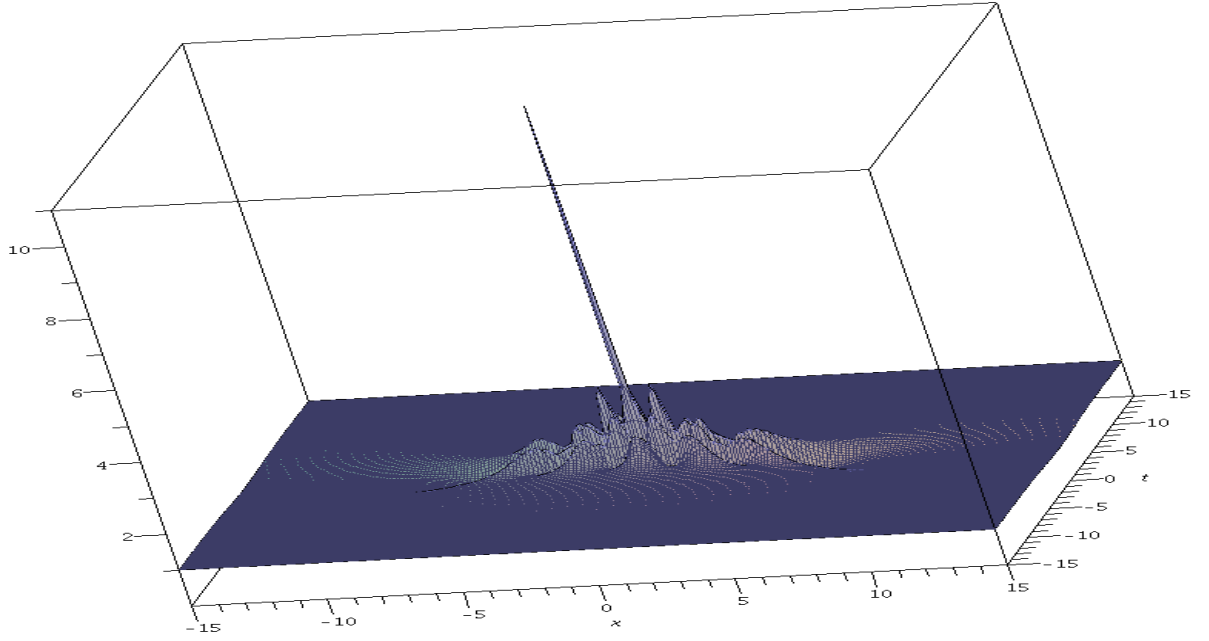


Figure 7: Solution of NLS,  $N=5$ ,  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 0$ .

If we choose  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 10^5$ , we obtain :

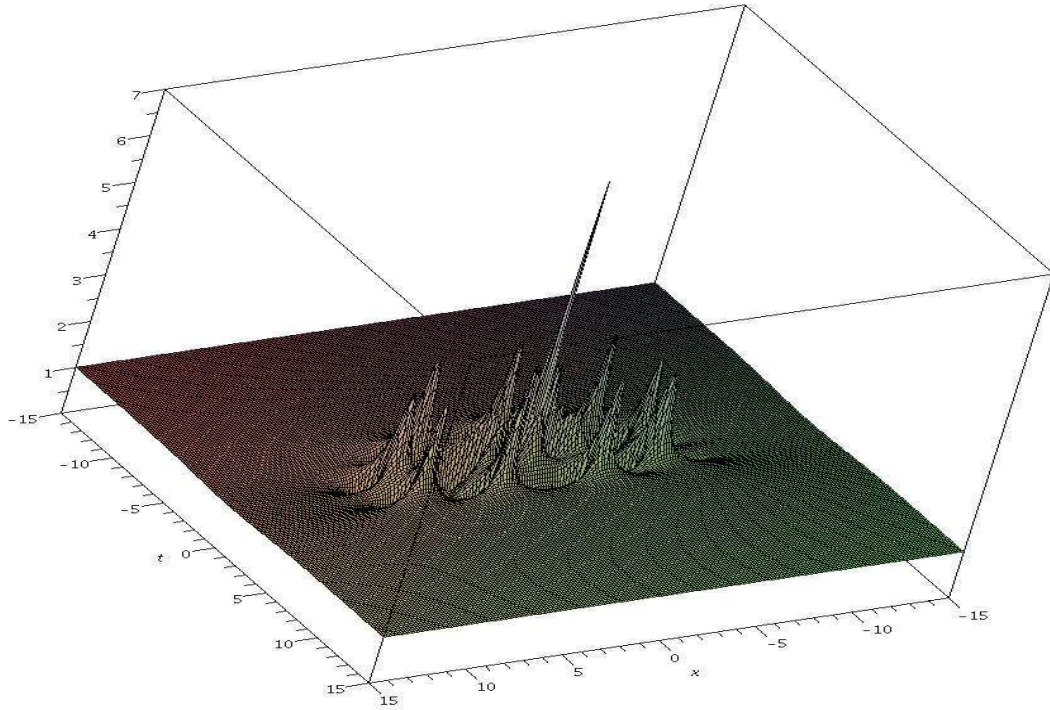


Figure 8: Solution of NLS,  $N=5$ ,  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 10^5$ .

If we choose  $\tilde{a}_1 = 10^8$ ,  $\tilde{b}_1 = -10^5$ , we have :

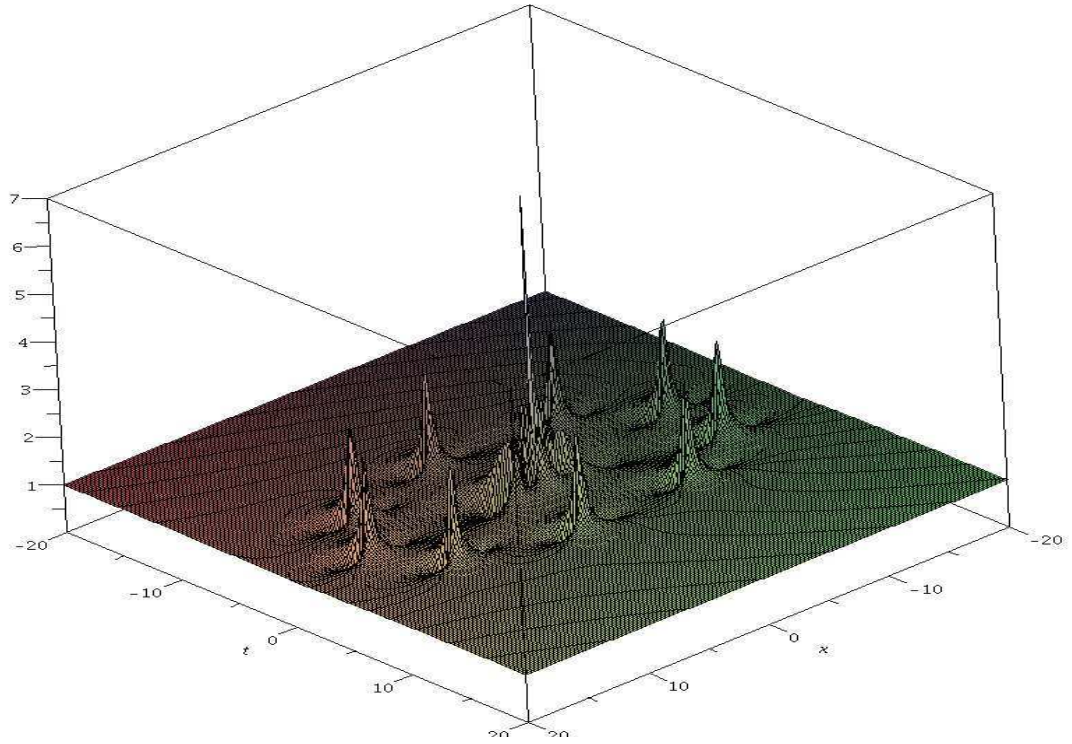


Figure 9: Solution of NLS,  $N=5$ ,  $\tilde{a}_1 = 10^8$ ,  $\tilde{b}_1 = -10^5$ .

#### 4.4 Case $N=6$

If we choose  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 0$ , we obtain the following plot :

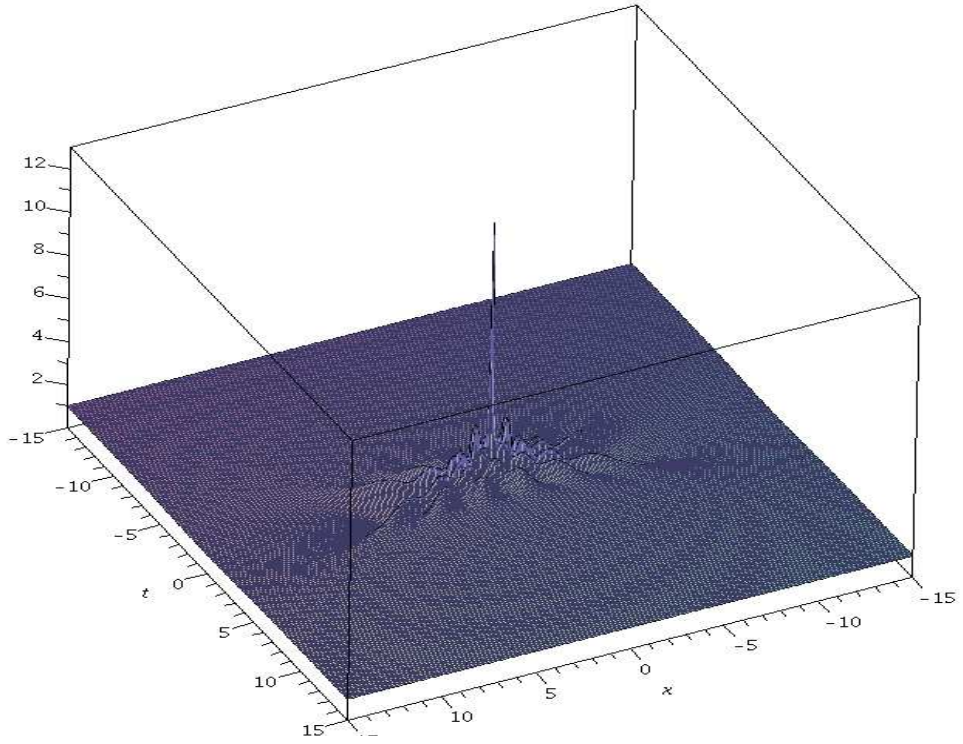


Figure 10: Solution of NLS,  $N=6$ ,  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 0$ .

If we choose  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 10^6$ , we obtain :

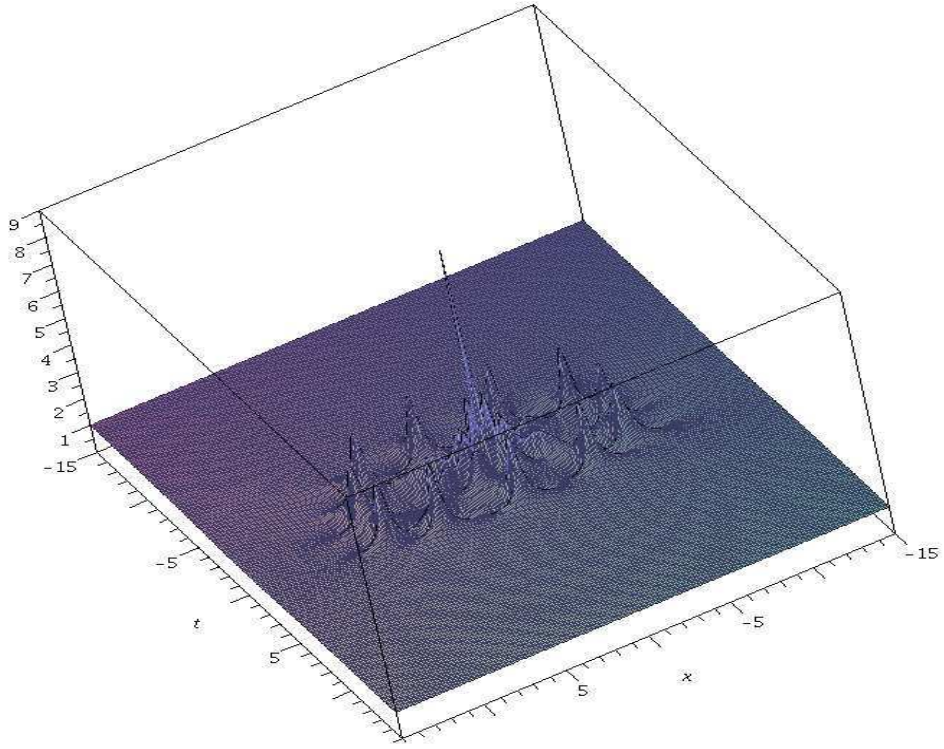


Figure 11: Solution of NLS,  $N=6$ ,  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 10^6$ .

If we choose  $\tilde{a}_1 = 10^9$ ,  $\tilde{b}_1 = -10^6$ , we obtain the regular figure with 12 peaks :

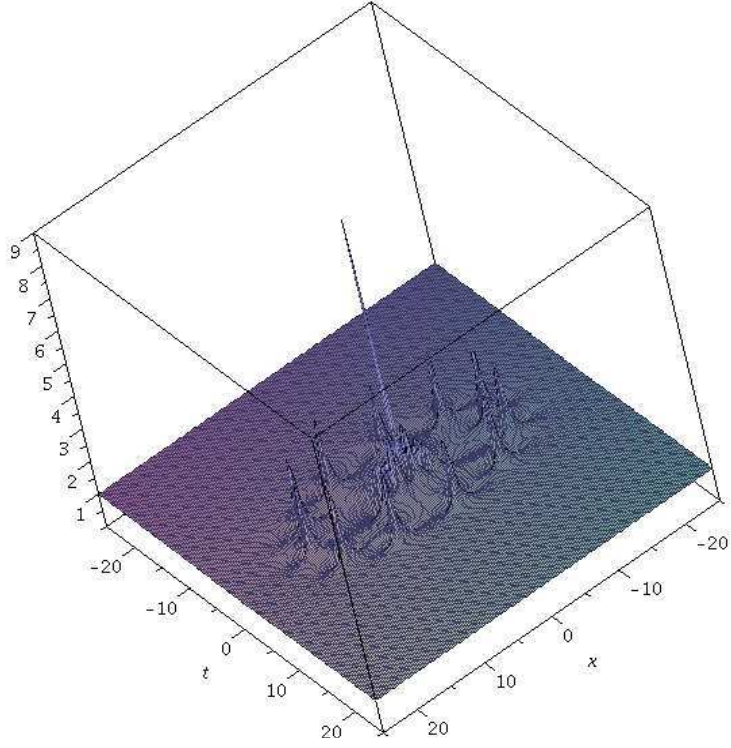


Figure 12: Solution of NLS,  $N=6$ ,  $\tilde{a}_1 = 10^9$ ,  $\tilde{b}_1 = -10^6$ .

#### 4.5 Case $N=7$

If we choose  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 0$ , we recognize Akhmediev's breather :

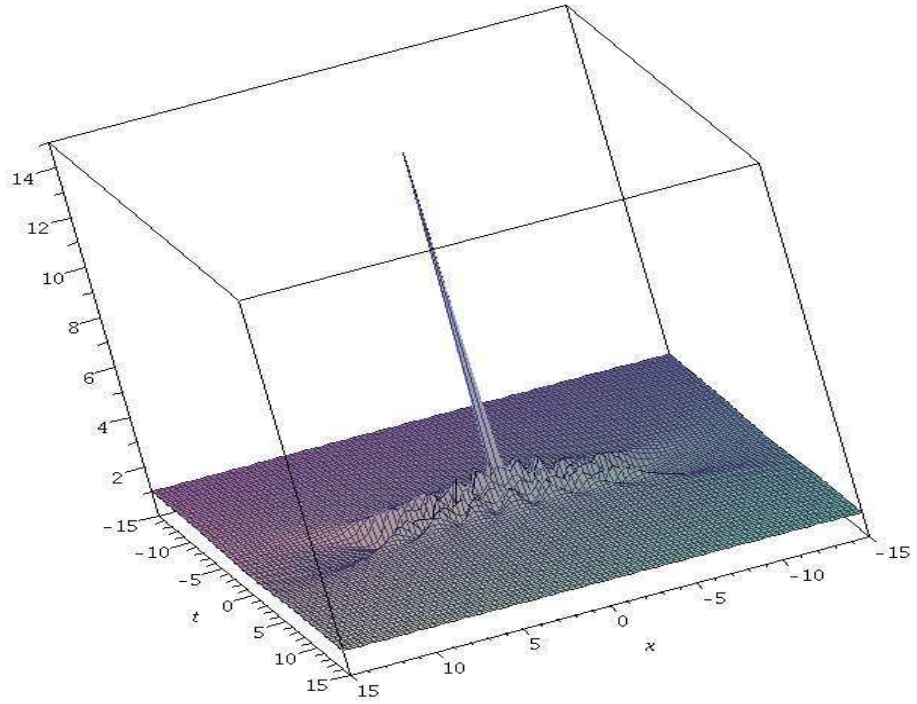


Figure 13: Solution of NLS,  $N=7$ ,  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 0$ .

If we choose  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 10^8$ , we obtain the following plot :



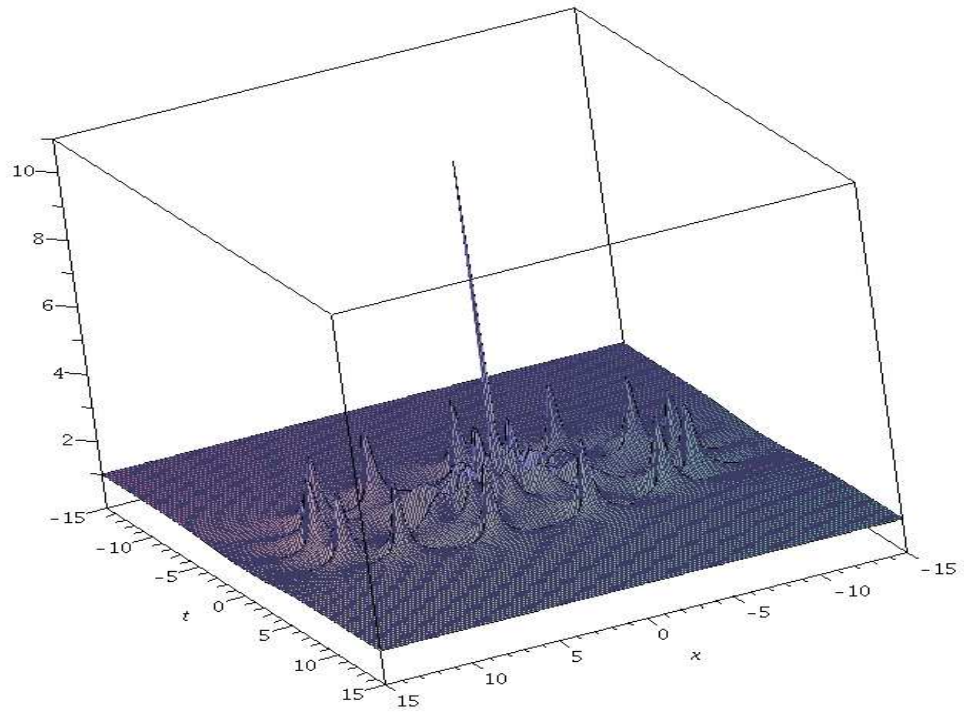


Figure 14: Solution of NLS,  $N=7$ ,  $\tilde{a}_1 = 0$ ,  $\tilde{b}_1 = 10^8$ .

If we choose  $\tilde{a}_1 = 10^{12}$ ,  $\tilde{b}_1 = -10^8$ , we obtain the following regular plot :



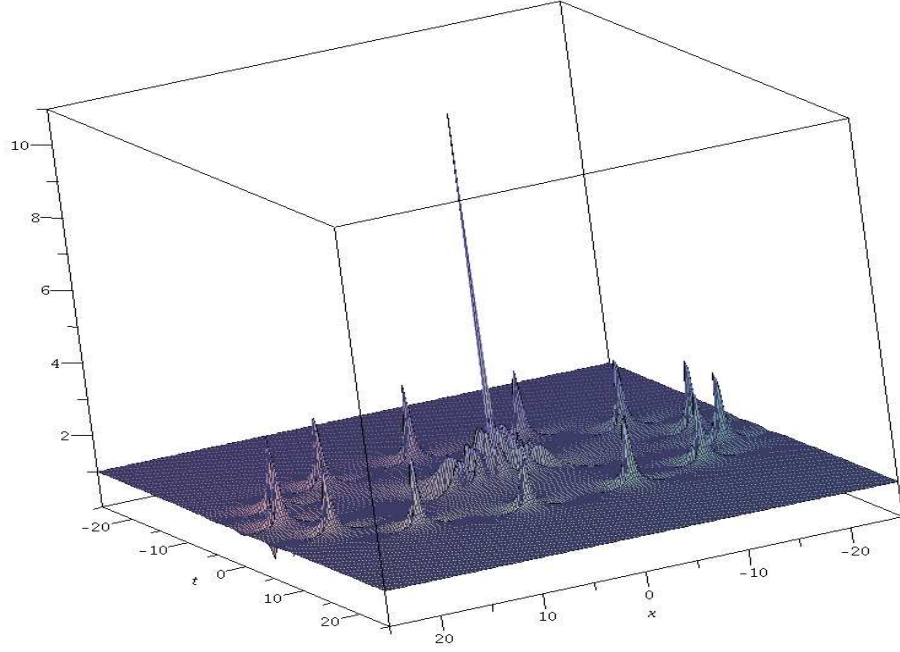


Figure 15: Solution of NLS,  $N=7$ ,  $\tilde{a}_1 = 10^{12}$ ,  $\tilde{b}_1 = -10^8$ .

## 5 Conclusion

The method described in the present paper provides a powerful tool to get explicitly solutions of the NLS equation.

As my knowledge, it is the first time that the Peregrine breather of order seven is presented.

It confirms the conjecture about the shape of the breather in the  $(x, t)$  coordinates, the maximum of amplitude equal to  $2N + 1$  and the degree of polynomials in  $x$  and  $t$  here equal to  $N(N + 1)$ . This new formulation gives an infinite set of non singular solution of NLS equation. It opens a large way to future researches in this domain.

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## Appendix

In the following, we choose all the parameters  $a$  and  $b$  equal to 0. The solution of NLS equation takes the form

$$v(x, t) = \frac{N(x, t)}{D(x, t)} \exp(2it - i\varphi).$$

We give for  $N = 4$  to  $N = 7$  the expressions of  $v(x, t)$ .

### 1. Case $N=4$

The polynomials  $N$  and  $D$  are defined by

$$\begin{aligned} N(x, t) = & -1048576x^{20} + (7864320 + 41943040it - 41943040t^2)x^{18} \\ & + (44236800 - 283115520it + 1509949440it^3 - 754974720t^4 + 1415577600t^2)x^{16} \\ & + (324403200 - 4246732800t^2 + 24159191040it^5 + 37748736000t^4 - 1415577600it - 25165824000it^3 - 8053063680t^6)x^{14} \\ & + (13212057600it^3 + 225485783040it^7 - 493250150400it^5 - 9083289600it \\ & + 465064427520t^6 - 10734796800t^2 - 56371445760t^8 - 235615027200t^4 + 1354752000)x^{12} \\ & + (-3223742054400t^6 + 1352914698240it^9 - 4396972769280it^7 - 138726604800it^3 - 74008166400t^2 \\ & - 6096384000 + 9909043200t^4 + 3297729576960t^8 + 1088673546240it^5 - 270582939648t^{10} - 32514048000it)x^{10} \\ & + (14543833006080t^{10} - 402554880000it^3 - 9398592000 - 804722688000t^2 + 5411658792960it^{11} \\ & + 10477161676800t^6 + 12049396531200it^7 - 1086898176000t^4 - 901943132160t^{12} - 18232639488000t^8 \\ & - 20857434931200it^9 - 5588700364800it^5 + 121927680000it)x^8 \\ & + (48197586124800it^9 + 16161649459200t^6 - 2061584302080t^{14} - 19920273408000t^4 + 47933344972800t^8 \\ & + 14431090114560it^{13} - 19074908160000it^5 + 7153090560000it^3 - 36923296972800t^{10} + 150377472000it \\ & - 11430720000 + 40587440947200t^{12} - 52312701665280it^{11} + 678730752000t^2 + 12472182374400it^7)x^6 \\ & + (-98297708544000it^9 + 273331047628800t^{10} + 24739011624960it^{15} - 207309570048000t^6 + 350542080000t^2 \\ & + 70490456064000it^5 + 52425444556800t^{12} + 291375415296000t^8 - 3092376453120t^{16} + 137168640000it \\ & + 9644670000 - 54116587929600it^{13} - 344240160768000it^7 + 37205154201600it^{11} + 69578470195200t^{14} \\ & + 3170119680000it^3 + 3292047360000t^4)x^4 + (24739011624960it^{17} + 1181263645900800t^{12} + 66486093742080t^{16} \\ & - 1542243483648000t^{10} - 1290950148096000it^9 + 20615843020800it^{15} + 330497733427200t^{14} \\ & + 1311675120000t^2 - 19203609600000t^4 - 73156608000000it^5 - 77157360000it - 202937204736000it^{13} \\ & + 546681913344000it^7 - 2748779069440t^{18} + 6958006272000t^6 - 2693991392870400it^{11} \\ & - 1756650405888000t^8 + 4511324160000it^3 + 2679075000)x^2 \\ & - 200930625 + 1099511627776t^{20} + 1883933717299200it^{13} - 26800595927040t^{18} + 569274531840000it^9 - 379138238054400t^{16} \\ & - 395779571712000it^7 - 796770120499200t^{14} - 10995116277760it^{19} + 832835262873600t^{12} - 53014155264000it^5 \\ & + 523098390528000t^{10} - 63909113364480it^{17} + 963558457344000t^8 + 369538986147840it^{15} + 48039505920000t^6 \\ & + 10716300000it - 11341179360000t^4 - 240045120000it^3 - 87873660000t^2 + 806992478208000it^{11}, \end{aligned}$$

$$\begin{aligned}
D(x, t) = & 1048576x^{20} + (41943040t^2 + 2621440)x^{18} + (-283115520t^2 + 754974720t^4 + 26542080)x^{16} \\
& + (471859200t^2 + 8053063680t^6 + 265420800 - 7549747200t^4)x^{14} \\
& + (6606028800t^4 + 7431782400t^2 + 56371445760t^8 - 70464307200t^6 + 1741824000)x^{12} \\
& + (270582939648t^{10} + 49235558400t^2 + 264241152000t^6 + 1683763200 + 188271820800t^4 - 253671505920t^8)x^{10} \\
& + (4280706662400t^8 + 338228674560t^{10} - 128894976000t^2 - 594542592000t^6 + 4463424000 + 1532805120000t^4 + 901943132160t^{12})x^8 \\
& + (8382528000 + 134120448000t^2 + 68966940672000t^8 + 2061584302080t^{14} - 2536095744000t^4 \\
& + 42658430976000t^6 + 6313601925120t^{12} + 31962609745920t^{10})x^6 \\
& + (161269678080000t^8 + 46039891968000t^6 - 365783040000t^4 + 332943851520000t^{10} + 123453466214400t^{12} \\
& + 1786050000 + 23192823398400t^{14} + 320060160000t^2 + 3092376453120t^{16})x^4 \\
& + (15545779200000t^4 + 158993694720000t^6 + 241591910400000t^{14} - 417368899584000t^{10} - 58785398784000t^8 \\
& + 893025000 + 2748779069440t^{18} + 38654705664000t^{16} - 122880240000t^2 + 296795661926400t^{12})x^2 \\
& + 22325625 + 46437300000t^2 + 1053529473024000t^{12} + 1099511627776t^{20} + 190374425395200t^{16} + 25426206392320t^{18} \\
& + 3594961440000t^4 + 435233046528000t^8 + 17801441280000t^6 + 592866548121600t^{14} + 727066135756800t^{10}
\end{aligned}$$

## 2. Case N=5

The polynomials  $N$  and  $D$  are defined by

$$\begin{aligned}
N(x, t) = & 3593187392256000000 + 689891979313152000000x^6 \\
& - 3506950894841856000000t^2 + 1001620947743539200000x^8 \\
& - 1132342702045986816000000t^4 - 18889465931478580854784t^{30} \\
& + 9380226632990588928000000t^6 - 402436987932672000000x^4 \\
& - 71863747845120000000x^2 + 605412580955104110182400000t^8 \\
& - 17592186044416x^{30} + 123919598989086405584486400t^{22} \\
& + 297066020686567237169971200t^{24} + 38234566441577787634483200t^{26} \\
& + 1044823584334909003530240t^{28} - 4564646798971790373263769600t^{20} \\
& - 20503770921695624558542848000t^{18} - 21705195782799224104550400000t^{16} \\
& - 16464595962633925070684160000t^{14} + 9740812251630034401361920000t^{12} \\
& + 907420350015602939658240000t^{10} + 238654152769536000x^{22} \\
& + 1062519926119464960000x^{10} - 250604339960217600000x^{12} \\
& - 171033922413527040000x^{14} - 49837699246325760000x^{16} \\
& + 81262980499310844995174400t^{24}x^2 - 15139622816317440000x^{18} \\
& + 1024508184389222400x^{20} + 22079567875276800x^{24} \\
& + 1731730813747200x^{26} + 197912092999680x^{28} \\
& - 6386388776384723297501184000t^{18}x^2 + 416086906642894976502988800t^{20}x^4 \\
& - 1190425059366988941361152000t^{20}x^2 + 26260842509408148022886400t^{20}x^6 \\
& + 3904806785522837886074880t^{26}x^2 + 677917844708826021888000t^{22}x^6 \\
& + 69481736812335318486220800t^{22}x^4 + 530962203922070260993228800t^{22}x^2 \\
& + 4681991171778313432596480t^{20}x^8 + 737334960492631818240t^8x^{20}
\end{aligned}$$

$$\begin{aligned}
& -15188692328906961715200t^8x^{18} + 91740947404476225945600t^8x^{16} \\
& -9044622232503975936000t^8x^{14} - 1200696044596248969216000t^8x^{12} \\
& -32697208502457678692352000t^8x^{10} + 118510986917599437127680000t^8x^8 \\
& -262466757462293993226240000t^8x^6 - 332595057410306998272000000t^8x^4 \\
& +2099327812978762108108800000t^8x^2 + 54262746010280263680t^6x^{22} \\
& -1016318179971956736000t^6x^{20} + 4368616543070296473600t^6x^{18} \\
& -11325789671913632563200t^6x^{16} - 138603785986070544384000t^6x^{14} \\
& -1861193095820391481344000t^6x^{12} + 9309545291393500446720000t^6x^{10} \\
& -7468309112126617681920000t^6x^6 - 100719222642454151823360t^{22}x^8 \\
& -134292296856605535764480t^{24}x^6 - 123962120175328186859520t^{26}x^4 \\
& -70835497243044678205440t^{28}x^2 - 55395572453349783502848t^{20}x^{10} \\
& -7419049882145060290560t^{16}x^{14} - 1854762470536265072640t^{14}x^{16} \\
& -360648258159829319680t^{12}x^{18} - 54097238723974397952t^{10}x^{20} \\
& -6147413491360727040t^8x^{22} - 512284457613393920t^6x^{24} \\
& -29554872554618880t^4x^{26} - 1055531162664960t^2x^{28} \\
& -15759259819131533430620160000t^{12}x^2 - 1407130850301005581516800000t^{12}x^4 \\
& -3168655831830796374638592000t^{12}x^6 - 123924431432410629931008000t^{12}x^8 \\
& +4867127054896516300800000t^6x^2 + 136602098065224813772800000t^6x^4 \\
& -23081488522229076459520t^{18}x^{12} + 662422579686909985305600t^{24}x^4 \\
& -23890368656849491722240000t^6x^8 - 539237634440278069739520000t^{18}x^4 \\
& +199940216583912302208614400t^{18}x^6 - 754032281291089300684800t^{18}x^8 \\
& +2309036601781454918123520t^{18}x^{10} - 10050849128814676725989376000t^{16}x^4 \\
& -12348349674722966686924800t^{16}x^6 + 72468727197550625842790400t^{16}x^8 \\
& -5497603512646245757747200t^{16}x^{10} + 837924614573806520893440t^{16}x^{12} \\
& +11166360257961750171746304000t^{16}x^2 + 6599147896409054773248000t^{14}x^8 \\
& +22122347001668801711308800t^{14}x^{10} - 2792211953131347089817600t^{14}x^{12} \\
& +226851717550204728115200t^{14}x^{14} - 136077135313427339673600t^{10}x^{16} \\
& +6855784676749832355840t^{10}x^{18} + 760715037774609163223040000t^{10}x^6 \\
& -574110117449990594887680000t^{10}x^8 + 13694342076892712219443200t^{10}x^{10} \\
& -772728085947074299822080000t^{14}x^2 - 6034682374224875869962240000t^{14}x^4 \\
& -3385986254051716141940736000t^{14}x^6 + 6944698416599625262694400000t^{10}x^2 \\
& -100487493230237224796160000t^{10}x^4 - 306035902636288376832000t^{10}x^{12} \\
& +908454125999168579174400t^{10}x^{14} - 2974978989460384697548800t^{12}x^{10} \\
& +5382843124711562831462400t^{12}x^{12} - 776361578603554956902400t^{12}x^{14} \\
& +45878619763985979801600t^{12}x^{16} - 217311652821860352000t^2x^{18} \\
& -15246591016933785600t^2x^{20} - 1516996192842547200t^2x^{22} \\
& -297857699964518400t^2x^{24} + 55415386039910400t^2x^{26} \\
& -82327109531369472000000t^2x^2 - 45686179963404288000000t^2x^4 \\
& -118960605919759564800000t^2x^6 + 187447798759056998400000t^2x^8 \\
& +54959655518868602880000t^2x^{10} - 731127543005970432000000t^4x^4
\end{aligned}$$

$$\begin{aligned}
& +7657800350944355942400000t^4x^6 + 1469962939270378291200000t^4x^8 \\
& +102464296006031769600000t^4x^{10} + 541364273413179310080000t^4x^{12} \\
& -68321228985854853120000t^4x^{14} + 2826801026509307904000000t^4x^{16} \\
& +15363603467662786560000t^2x^{12} + 7877376947540459520000t^2x^{14} \\
& -2316726664647671808000t^2x^{16} - 6394158434802991104000t^4x^{16} \\
& -307841128105771008000t^4x^{18} + 27638423787405312000t^4x^{20} \\
& -34191293186624716800t^4x^{22} + 2475220576449331200t^4x^{24} \\
& -(4474736705877024832487424000i)t^{21} - (973325387811016309682995200i)t^{23} \\
& -(48368469765910866910248960i)t^{25} + (2052227774063702546841600000i)t^{11} \\
& +(511165044043202691072000000i)t^9 - (170242952819488535347200000i)t^7 \\
& -(7916247049317226905600000i)t^5 - (14104458243735552000000i)t^3 \\
& +(287454991380480000000i)t + (14624828633331484330033152000i)t^{15} \\
& +(4387979219806808916885504000i)t^{17} - (8783473670339729855348736000i)t^{19} \\
& +(59109745109237760i)t^3x^{26} - (419454323422396416000000i)t^3x^{22} \\
& -(160259351638966272000000i)tx^6 + (4214712085961158353223680i)t^{27} \\
& +(2163889548958975918080i)t^{11}x^{18} - (193063496654078660459886400i)t^{21}x^{22} \\
& -(100365736909141692540518400i)t^{21}x^4 - (6732692652022512148807680i)t^{21}x^6 \\
& -(12859138468604237379010560000i)t^{15}x^2 + (634352727169645009698816000i)t^{13}x^6 \\
& -(113309125472760920801280000i)t^{23}x^2 - (135629797491220237044940800i)t^{15}x^8 \\
& +(59352399057160482324480i)t^{15}x^{14} + (927956795300510485708800i)t^{11}x^{14} \\
& -(2156753915104980910473216000i)t^{15}x^6 + (328301860508856578211840000i)t^9x^8 \\
& -(1059819258013286400i)tx^{22} - (265249548992128909049856000i)t^{13}x^8 \\
& -(6400477087609651200i)t^3x^{20} - (90050002314854400i)tx^{24} \\
& +(991696961402625494876160i)t^{27}x^2 - (571163791359936001631846400i)t^{17}x^6 \\
& -(24513482783505340012953600i)t^{13}x^{10} + (3891936938939693767065600i)t^{13}x^{12} \\
& -(509346309216497408409600i)t^{13}x^{14} + (12983337293753855508480i)t^{13}x^{16} \\
& -(438134268982282577510400000i)t^7x^2 - (12848094196943919513600i)t^9x^{18} \\
& -(40980327375568896000i)tx^{18} + (72020006110872207360000i)t^3x^{10} \\
& +(545026421387427840000i)tx^{16} + (3219495903461376000000i)tx^2 \\
& -(3579604828806168434442240000i)t^{19}x^2 - (1460298592300752703586304000i)t^{19}x^4 \\
& -(36048281392391823713894400i)t^{19}x^6 + (6014504159045222400000i)tx^{10} \\
& +(8527502183042226585600000i)t^5x^6 + (3200493777375232870318080000i)t^{11}x^4 \\
& +(3120142857158167741071360000i)t^{11}x^6 - (422325775175211804524544000i)t^{11}x^8 \\
& -(8278703751757824000000i)tx^4 + (1107911449066995670056960i)t^{21}x^8 \\
& -(93740181582407270400000i)t^3x^8 - (62065232364699648000i)t^5x^{22} \\
& +(4627795739945763568877568000i)t^{15}x^4 - (4769878378074493377576960i)t^{17}x^{10} \\
& +(45834689216702840832000i)t^5x^{14} + (4788949827578757120000i)tx^{12} \\
& +(52690745717466071040000i)t^3x^{14} + (8807060728452527916318720i)t^{15}x^{10} \\
& -(1877590316327480642764800i)t^{15}x^{12} - (20898944158028267520000i)t^3x^{12}
\end{aligned}$$

$$\begin{aligned}
& - (882102114983293747200i)t^5x^{18} + (1611507562279266429173760i)t^{23}x^6 \\
& + (1536853372840181760i)t^5x^{24} - (4201468665788923851571200i)t^{11}x^{12} \\
& + (705521076605372753510400000i)t^9x^4 + (7379410738537656483840000i)t^7x^6 \\
& - (47214001120669492838400000i)t^7x^8 + (25307307481980884484096000i)t^7x^{10} \\
& - (178625678284116983808000i)t^7x^{12} - (209440234922399760384000i)t^7x^{14} \\
& - (41403273187402815897600i)t^7x^{16} + (270486193619871989760i)t^9x^{20} \\
& + (16538889840453699376250880000i)t^{11}x^2 + (24589653965442908160i)t^7x^{22} \\
& - (27286548100357187174400000i)t^5x^4 + (10861415663822438400000i)t^7x^{18} \\
& + (132097867272673453670400i)t^9x^{16} - (519133261524369408000000i)t^3x^4 \\
& + (1814044308651638784000i)t^3x^{16} + (207733396700061688135680i)t^{17}x^{12} \\
& + (434766952714721034240i)t^5x^{20} - (1699405171890585600i)t^3x^{24} \\
& + (2061035938005167112192000000i)t^9x^2 + (1055531162664960i)tx^{28} \\
& + (1611507562279266429173760i)t^{25}x^4 - (23929556785294749990912000i)t^9x^{10} \\
& + (343809808336711109836800000i)t^7x^4 + (6042864278644433312808960000i)t^{13}x^4 \\
& - (57215277784866897920000i)t^9x^{14} - (484295008141751353344000i)t^1x^10 \\
& + (464857950657480700723200i)t^{23}x^4 + (7862612906697063137280000i)t^5x^8 \\
& + (6010499882222309854937088000i)t^{17}x^2 + (1550087360736468664320000i)t^5x^{12} \\
& + (1594806375882424320000i)tx^{14} - (1826752437725914202112000i)t^5x^{10} \\
& + (6508011309204729810124800i)t^{25}x^2 - (5010740706245254985023488000i)t^{17}x^4 \\
& + (17190268412538912768000000i)t^5x^2 + (26843989178012838962135040000i)t^{13} \\
& - (65352136762463103221760000i)t^9x^6 - (111644685562281984000i)t^3x^{18} \\
& + (3615814040026204864512000i)t^{17}x^8 - (9221996027343603907952640000i)t^{13}x^4 \\
& - (7829951106386940552806400i)t^{19}x^8 - (11083077207982080i)tx^{26} \\
& - (1139163007745230110720i)t^7x^{20} + (553955724533497835028480i)t^{19}x^{10} \\
& - (1834231213761704755200000i)t^3x^6 + (3657415478634086400i)t^3x^{22} \\
& - (4837451489737703424000i)t^5x^{16} + (283341988972178712821760i)t^{29} \\
& - (21250398522389299200000i)tx^8 - (10500782721859584000i)tx^{20} \\
& - (97000510358141785866240i)t^{11}x^{16} - (837112579672932089856000i)t^9x^{12} \\
& D(x, t) = 432518136525619200000x^6 + 1541804044677120000000t^2 \\
& + 392631163984281600000x^8 + 284402742017458176000000t^4 \\
& + 18889465931478580854784t^{30} + 3362027121813749760000000t^6 \\
& + 60975301201920000000x^4 + 19599203957760000000x^2 \\
& + 241614729037663646515200000t^8 + 17592186044416x^{30} \\
& + 1170441047589273489899520000t^{22} + 204951512401595827067289600t^{24} \\
& + 20337535341264780656640000t^{26} + 1009405835713386664427520t^{28} \\
& + 3738595696032685094653132800t^{20} + 6669056746644308068663296000t^{18} \\
& + 5450887469422271161958400000t^{16} + 7441435294537031645921280000t^{14} \\
& + 5807382063900108049612800000t^{12} + 1040756650099481688145920000t^{10}
\end{aligned}$$



$$\begin{aligned}
& +254889129148416000x^{22} + 245908458260398080000x^{10} \\
& +374569324196659200000x^{12} + 124432437403975680000x^{14} \\
& +25999984897818624000x^{16} + 45410811054852645951897600t^{24}x^2 \\
& +4792260621238272000x^{18} + 2296193884146892800x^{20} \\
& +17750240840908800x^{24} + 1039038488248320x^{26} \\
& +65970697666560x^{28} + 6309831064001936822894592000t^{18}x^2 \\
& +273889401728689288249344000t^{20}x^4 + 1575376470498366367727616000t^{20}x^2 \\
& +26982825014023047736197120t^{20}x^6 + 2789147703944884204339200t^{26}x^2 \\
& +2486990036017521748869120t^{22}x^6 + 45454391487726784767590400t^{22}x^4 \\
& +342128188278426772596326400t^{22}x^2 + 1134543935823413835202560t^{20}x^8 \\
& -128741024847919841280t^8x^{20} + 1027179595635779174400t^8x^{18} \\
& +2967493922437201920000t^8x^{16} + 51058351312522444800000t^8x^{14} \\
& +2814087578532150509568000t^8x^{12} + 3227192189276550856704000t^8x^{10} \\
& +58202507015295011389440000t^8x^8 + 215456891557737450700800000t^8x^6 \\
& +231100129825171439616000000t^8x^4 - 85654966326676527513600000t^8x^2 \\
& -11230851570755174400t^6x^{22} + 60513601555582156800t^6x^{20} \\
& +3879077022793728000t^6x^{18} + 8930847518040784896000t^6x^{16} \\
& +87545434673548099584000t^6x^{14} - 327338035938695577600000t^6x^{12} \\
& +716792974760245985280000t^6x^{10} + 45399667230773556019200000t^6x^6 \\
& +100719222642454151823360t^{22}x^8 + 134292296856605535764480t^{24}x^6 \\
& +123962120175328186859520t^{26}x^4 + 70835497243044678205440t^{28}x^2 \\
& +55395572453349783502848t^{20}x^{10} + 7419049882145060290560t^{16}x^{14} \\
& +1854762470536265072640t^{14}x^{16} + 360648258159829319680t^{12}x^{18} \\
& +54097238723974397952t^{10}x^{20} + 6147413491360727040t^8x^{22} \\
& +512284457613393920t^6x^{24} + 29554872554618880t^4x^{26} \\
& +1055531162664960t^2x^{28} + 7961426529817146918174720000t^{12}x^2 \\
& +843514205937109743697920000t^{12}x^4 + 54188987577307282538496000t^{12}x^6 \\
& -58427720984423376617472000t^{12}x^8 + 5185623933300240384000000t^6x^2 \\
& +31626414950727234355200000t^6x^4 + 23081488522229076459520t^{18}x^{12} \\
& +326653399296000000 + 3447696467376315197030400t^{24}x^4 \\
& +2795623085722986086400000t^6x^8 + 506109696013295985623040000t^{18}x^4 \\
& +139963553766563635003392000t^{18}x^6 + 10621368624544019487129600t^{18}x^8 \\
& +322253089752659798261760t^{18}x^{10} + 12402309187740836560896000t^{16}x^4 \\
& +166550561485094752616448000t^{16}x^6 + 48990960639069741121536000t^{16}x^8 \\
& +2950871966563758715699200t^{16}x^{10} + 44942321401455653683200t^{16}x^{12} \\
& +14930963824823248135127040000t^{16}x^2 + 110646686600627100844032000t^{14}x^8 \\
& +11484295242665150958796800t^{14}x^{10} + 605018978260505277235200t^{14}x^{12} \\
& -4280221085852919398400t^{14}x^{14} + 11455823260640933314560t^{10}x^{16} \\
& -905088417112648581120t^{10}x^{18} + 329157519925544742813696000t^{10}x^6 \\
& -37816839207478018179072000t^{10}x^8 + 26149982367173726070374400t^{10}x^{10}
\end{aligned}$$

$$\begin{aligned}
& +14108289674109167264071680000t^{14}x^2 - 534419122544104156692480000t^{14}x^4 \\
& -386045124656108163563520000t^{14}x^6 - 1252453640643678516019200000t^{10}x^2 \\
& +1660587789415640098406400000t^{10}x^4 + 2963793282957456703488000t^{10}x^{12} \\
& +127134421975850758963200t^{10}x^{14} + 31689930438754648562073600t^{12}x^{10} \\
& +1667568663174750142464000t^{12}x^{12} + 94736370681477542707200t^{12}x^{14} \\
& -3682773559285949399040t^{12}x^{16} + 65936733065183232000t^2x^{18} \\
& +9573440871097958400t^2x^{20} + 602642323184025600t^2x^{22} \\
& +20780769764966400t^2x^{24} - 11083077207982080t^2x^{26} \\
& -6146310361153536000000t^2x^2 + 24724613561647104000000t^2x^4 \\
& +18701879810929459200000t^2x^6 - 24852304967919206400000t^2x^8 \\
& +13311951515355709440000t^2x^{10} + 90090136450105344000000t^4x^4 \\
& -846074231955180748800000t^4x^6 + 785872556615584972800000t^4x^8 \\
& +253290289902932459520000t^4x^{10} + 30704050024564654080000t^4x^{12} \\
& -21963682613884354560000t^4x^{14} + 1980979522659680256000000t^4x^2 \\
& +5207787865689292800000t^2x^{12} + 821566920909127680000t^2x^{14} \\
& -470003783791804416000t^2x^{16} + 2114748541141254144000t^4x^{16} \\
& +304931820338675712000t^4x^{18} + 17746777379281305600t^4x^{20} \\
& +1828707739317043200t^4x^{22} - 554153860399104000t^4x^{24}.
\end{aligned}$$

### 3. Case N=6

The polynomials  $N$  and  $D$  are defined by

$$\begin{aligned}
N(x, t) = & (130676991329371088131551815270400000t^{20} + 304159304532499302649143125606400000t^{18} + \\
& 82274724986110217960494517452800000t^{16} + 24522724634493022093505986560000000t^{14} \\
& -8374137387902637169390387200000000t^{12} + 13029752662919612928000000x^{12} \\
& +17927619210928982016000000x^{14} + 8652194022058481664000000x^{16} \\
& +3987077385111625728000000x^{18} - 49242956390085427200000x^{20} \\
& -12581738988371940359233307934720000t^{22} - 142471752915773030400000x^{22} \\
& -5076881258565254152825759334400000t^{24} - 6003371153223348445863129120768000t^{28}x^2 \\
& -30346203387962327040000x^{24} + 3194465160736712672975530229760t^{36} \\
& +16667909082316800x^{36} - 50820486401353805136000000x^{10} \\
& +53324467393932153168750000t^2 - 32661858646516799700000000x^8 \\
& +3577668467841632864700000000t^4 - 14737667925867336450000000x^6 \\
& -524237317699453990853760000000t^6 + 6273466752227312137500000x^4 \\
& -82190313059811212101063680000000t^8 + 784183344028414017187500x^2 \\
& -290232638614071372247547904000000t^{10} + 865865406873600x^{38} \\
& +162844574638002327262624481280t^{38} - 3515458568357285376747101591961600t^{30} \\
& +9540199756962201600x^{30} - 17793896935440197600500802125824000t^{28} \\
& -38690544532792538522217640624128000t^{26} + 4179430850376499200x^{32} \\
& +311955071120179200x^{34} - 238152498374515252372340893286400t^{32} \\
& +1620346841146711477800000000t^2x^4 + 1799588748353206110300000000t^2x^2
\end{aligned}$$

$$\begin{aligned}
& +13850398478334325017381175296000t^{34} - 6406275691988765429760000000t^2x^{10} \\
& - 1174307185018631774880000000t^2x^8 + 5707699630013745524160000000t^2x^6 \\
& - 181007670580914341412864000000t^4x^{12} - 3922239420529166499840000000t^4x^{10} \\
& - 257068171959178028359680000000t^4x^8 - 709429917325492677726720000000t^4x^6 \\
& + 4554276425157839688000000000t^4x^4 - 123375789568374385442400000000t^4x^2 \\
& + 172356479738448445440000000t^2x^{18} + 576522030352621731840000000t^2x^{16} \\
& - 2052834294940463333376000000t^2x^{14} - 2889102380234435076096000000t^2x^{12} \\
& + 235292930319472442081280000000t^6x^6 - 19083105725960179439585280000000t^6x^4 \\
& - 83765271854643887572480000000t^6x^2 + 6022183725161806351564800000t^4x^{16} \\
& + 14822610651470630486016000000t^4x^{14} - 444958817402333593625333760000000t^8x^2 \\
& + 2398401005860175946448896000000t^6x^{14} + 9766830495599016957444096000000t^6x^{12} \\
& - 3879347444249210377784524800000t^6x^{10} + 7686358541099158352560128000000t^6x^8 \\
& + 397800127501274234734999555276800000t^{18}x^2 + 141611701718037306903131219558400000t^{16}x^4 \\
& - 77122158784324793482916501913600000t^{16}x^2 + 30056590690344115436375978803200000t^{14}x^6 \\
& + 2182759648944286926574190592000000t^{14}x^4 + 418503408638170614145744896000000t^{14}x^2 \\
& + 1492444278814740435060129792000000t^{12}x^8 + 886860669870899270105274776000000t^{12}x^6 \\
& + 2783454017978870795480334336000000t^{12}x^4 + 17074228651321446767511207936000000t^{12}x^2 \\
& + 39525148590423603074511667200000t^{10}x^{10} + 1024797651488330815547375616000000t^{10}x^8 \\
& - 1130716815140272736758136832000000t^{10}x^6 - 505638065933824321174634496000000t^{10}x^4 \\
& - 3665884543785271110625394688000000t^{10}x^2 + 4468120594522299585213235200000t^8x^{12} \\
& + 29910409415857677027350937600000t^8x^{10} - 80071106228346824067907584000000t^8x^8 \\
& + 140431627964630793463529472000000t^8x^6 + 60235149526832166510919680000000t^8x^4 \\
& + 2107157703588298651512864768t^{40} + 69269232549888x^{40} - 4398046511104x^{42} \\
& - 19342813113834066795298816t^{42} + 13564393772444526890188800t^{10}x^{26} \\
& + 5251091426009956221793704345600t^{28}x^8 + 9374582034547518740130850406400t^{30}x^6 \\
& + 11860323462109574495837827891200t^{32}x^4 + 2406535838623662321671098859520t^{26}x^{10} \\
& + 419122741387123923473557094400t^{22}x^{14} + 1028899809518611239536689152000t^{24}x^{12} \\
& + 148959751303875713185087488000t^{20}x^{16} + 170710247836455760664985600t^{12}x^{24} \\
& + 87933827260455321600t^4x^{32} + 17415814527696544727040t^6x^{30} \\
& + 678222481557682755993600t^8x^{28} + 1475838932049899227290009600t^{14}x^{22} \\
& - 29684566402368649311509544960000t^{14}x^{14} - 618167015515602501526093824000t^{14}x^{16} \\
& + 26768153105602468581998592000t^{14}x^{18} + 1244038685257223188297600204800000t^{16}x^6 \\
& - 5319016096575029456694474178560000t^{16}x^8 + 1279503167224870826982607159296000t^{16}x^{10} \\
& - 103519019531854247320734400512000t^{16}x^{12} - 15590430582092097270885384192000t^{16}x^{14} \\
& - 33947568448408047679402357555200000t^{18}x^4 - 10511849301398468930982421463040000t^{18}x^6 \\
& - 1101408938529969675896063262720000t^{18}x^8 + 21794914383199203466590289920000t^{12}x^{14} \\
& - 1882705701688384657758879744000t^{12}x^{16} - 56580697170227032951357440000t^{12}x^{18} \\
& + 3878882819130028045683916800t^{12}x^{20} + 3826649604707605351652917248000000t^{14}x^8 \\
& - 260093950641466110684168192000000t^{14}x^{10} + 239476186779159813851594096640000t^{14}x^{12}
\end{aligned}$$

$$\begin{aligned}
& +226904280603480704146672189440000t^{12}x^{10} - 54400278399993364405215559680000t^{12}x^{12} \\
& +1578813021748933517125877760000t^{10}x^{16} - 56421242364564286293934080000t^{10}x^{18} \\
& -5473567973976711218646220800t^{10}x^{20} + 101282529609939830597222400t^{10}x^{22} \\
& +866978725483223130293340733440000t^{22}x^2 - 21554988228400687174913894645760000t^{22}x^4 \\
& +5833280126811999691154204393472000t^{22}x^6 - 1692754945579509234206370693120000t^{22}x^8 \\
& -147985231562978344972873157836800t^{22}x^{10} - 117220069376598451153006913126400000t^{24}x^2 \\
& -3606691997144060226850258944000000t^{24}x^4 - 1938319329515352397991638990848000t^{24}x^6 \\
& -467333661870917302036847394816000t^{24}x^8 - 40196491256559835664946806390784000t^{26}x^2 \\
& -3176951330081070357438617616384000t^{26}x^4 - 904537357828423629139265716224000t^{26}x^6 \\
& +280507056646219587020390400000t^{10}x^{12} - 7834776665591977122642001920000t^{10}x^{14} \\
& +351417647058818328713471459328000t^{18}x^{10} - 167164394438381123855066333184000t^{18}x^{12} \\
& -3275138962547785765220253696000t^{18}x^{14} + 209348911860207722305859616768000000t^{20}x^2 \\
& -69182893465796404348284504637440000t^{20}x^4 - 5179782650849745327868398796800000t^{20}x^6 \\
& +3107035033487762130926378680320000t^{20}x^8 - 780645876774648274975414498099200t^{20}x^{10} \\
& -29064418237400190004779968102400t^{20}x^{12} - 1021166865913610214329517342720000t^{28}x^4 \\
& -643855095469597985910711071539200t^{30}x^2 + 28216962161043182714880000t^2x^{20} \\
& +4553926564682913546240000t^2x^{22} + 1089353185242843709440000t^2x^{24} \\
& -109543867036748218368000t^2x^{26} - 10605193913696256000000t^2x^{28} \\
& -551741126442850713600t^2x^{30} - 771081978815447040000x^{28} \\
& -4568266985082716160000x^{26} + 354295859065251043265740800000t^8x^{14} \\
& -504281339250167885290536960000t^8x^{16} + 89125941971739511955128320000t^8x^{18} \\
& -14771955722457489384407040000t^8x^{20} - 2579794583567896915476480000t^8x^{22} \\
& -12577694624499351158784000t^8x^{24} + 41333961150761659269120000000t^6x^{16} \\
& -13079267440752624654090240000t^6x^{18} + 4113162625508371681247232000t^6x^{20} \\
& -16322002359249329455104000t^6x^{22} - 9917174038210516353024000t^6x^{24} \\
& -574740295332151689216000t^6x^{26} + 769495633791371182080000000t^4x^{18} \\
& -35146293073997620838400000t^4x^{20} + 116740110638455833231360000t^4x^{22} \\
& -1156846770416611491840000t^4x^{24} - 341862050367943999488000t^4x^{26} \\
& -17602857560677810176000t^4x^{28} - 28208920857359155200t^2x^{32} \\
& -459306963730169856000t^4x^{30} - 47295743577338098483200t^6x^{28} \\
& -3048843404359167167692800t^8x^{26} - 78591102059488214620569600t^{10}x^{24} \\
& -1105273317008696945305190400t^{12}x^{22} - 9713761369774005468266496000t^{14}x^{20} \\
& -104511838887931957865349120000t^{16}x^{16} - 57336486357486331997297049600t^{16}x^{18} \\
& -28006548001014786328125 + 9182793192693972428579143680t^{16}x^{20} \\
& -241754408013083730331985510400t^{18}x^{16} - 803711151345709001549964902400t^{20}x^{14} \\
& -2434164287594765531672582553600t^{22}x^{12} - 7003909504890127521335476224000t^{24}x^{10} \\
& -16258866372646639822582264627200t^{26}x^8 - 23937352718546582211371257036800t^{28}x^6 \\
& -14057436215111227785648223027200t^{30}x^4 + 9772923577259908191757742899200t^{32}x^2 \\
& -3136733376113656068750000it - 31118534408803516039720599552000000it^{13}
\end{aligned}$$

$$\begin{aligned}
& +179400689678910125855408652288000000it^{19} - 92450680237364914030511967436800000it^{17} \\
& - 44680685994957750725922678374400000it^{15} - 874148309544138151997472768000000it^{11} \\
& - 9051657785402457686630400000000it^9 + 16746521200817938995548160000000it^7 \\
& + 349604887297608346884480000000it^5 + 29634661991473779240000000it^3 \\
& +189120006247548024160067675750400000it^{21} + 13710637516226960614134317580288000it^{27} \\
& +71064895596404886819735909433344000it^{25} + 85068913796130252196170505912320000it^{23} \\
& - 5018773401781849710000000itx^2 - 83039200701483633868800000it^5x^{16} \\
& +363651043103876590652620800000it^7x^{14} - 139440026561558033203200000it^3x^{18} \\
& +6268757128294013337600000itx^{20} + 133559322398266650037448815411200000it^{17}x^4 \\
& +265155523025203543340588256460800000it^{19}x^2 + 24848549853847487146295820288000000it^{15}x^6 \\
& -41273507357722137880166400000000it^9x^4 - 47718132406773061546672128000000it^9x^6 \\
& -409889263172452534418669568000000it^9x^8 + 12524232380160862819713024000000it^9x^{10} \\
& -11722986284931477432824758272000000it^{11}x^2 - 5051252967285585457994268672000000it^{11}x^4 \\
& -672660004333369028140597248000000it^{11}x^6 + 663993202870949744757178368000000it^{11}x^8 \\
& +18279630702336234246484525056000000it^{13}x^2 - 16974444206427155258419445760000000it^{13}x^4 \\
& -7131005536638246684865855488000000it^{13}x^6 + 663307352538500994247837089792000000it^{15}x^2 \\
& -2563793130931038978048000000it^3x^{16} + 17685201511040803740000000itx^4 \\
& +522589738344268795200000000itx^6 + 1016409728027076102720000000itx^8 \\
& -312714063910070710272000000itx^{10} - 501973337906011496448000000itx^{12} \\
& -276870208705871413248000000itx^{14} - 1763792326515512339505975656448000000it^{17}x^2 \\
& -558485756052497241499238400000000it^9x^2 + 22194017923492874142351360000000it^7x^8 \\
& -170979199828920901274959872000000it^7x^{10} - 13465315900742218675126272000000it^7x^{12} \\
& -143534785864018526208000000itx^{16} + 1969718255603417088000000itx^{18} \\
& +12733345087949378692800000000it^3x^2 + 24013635781478107564800000000it^3x^4 \\
& +1217590296080146210252800000000it^3x^6 + 218609003525870555136000000000it^3x^8 \\
& -68915821020395453153280000000it^3x^{10} + 53356834387901522903040000000it^3x^{12} \\
& -16490427271028092698624000000it^3x^{14} - 871337957585499407646720000000it^5x^6 \\
& -1745946085939980673351680000000it^5x^8 + 4916208569464755956219904000000it^5x^{10} \\
& -688337455098696593257267200000it^5x^{12} - 979107766354881426751488000000it^5x^{14} \\
& +66291948028992606848040960000000it^7x^2 - 65100417802656175439216640000000it^7x^4 \\
& -7366979512184196839768064000000it^7x^6 - 502249183584021564135133151232000000it^{15}x^4 \\
& -1086117568431372977955840000000it^5x^2 + 2553416209978975025879040000000it^5x^4 \\
& +4658744490072645468350840832000000it^{13}x^8 + 81143797205972851403784192000000it^{11}x^{10} \\
& +41457438526069823659573248000000it^9x^{12} + 43180590813665034240000itx^{26} \\
& +280529624686808077959168000it^7x^{22} + 4274394850752626341969920000it^9x^{20} \\
& +1197497452659195739512483348480000it^{19}x^{10} + 331500117333115557858900967424000it^{21}x^8 \\
& +3614003629024326552068246470656000it^{23}x^6 + 11076242798116488609792000it^5x^{24} \\
& +253802963770735067136000it^3x^{26} - 572411985417732096000itx^{28} \\
& +36211760706281352600748032000it^{11}x^{18} - 686702447560384727557865472000it^{13}x^{16}
\end{aligned}$$

$$\begin{aligned}
& +480607388209929744606560256000it^{15}x^{14} - 9457877798008398928725147648000it^{25}x^4 \\
& - 6040880073988867584348590702592000it^{27}x^2 - 136508037042965776957440000it^9x^{22} \\
& \quad - 39272801034337134745485312000it^{13}x^{18} + 2862213347615440896000it^3x^{28} \\
& - 81342884389055836953403352678400it^{21}x^{10} - 34611341837775193966142029824000it^{19}x^{12} \\
& \quad + 171968454786061172736000it^5x^{26} - 4093146367802632849430937600it^{11}x^{20} \\
& \quad - 476463860665945350840778752000it^{15}x^{16} + 2554410040510642126848000it^7x^{24} \\
& - 5738530825456039112050999296000it^{17}x^{14} - 2105194565269620861922795585536000it^{29}x^2 \\
& - 569600135887715790718104502272000it^{27}x^4 + 237376536542879789562992787456000it^{25}x^6 \\
& \quad + 24184876704701330485753675776000it^{23}x^8 - 267483574424095948800itx^{30} \\
& + 157607173704729467077603098624000it^{17}x^{12} + 3411782612506572724843315200000it^9x^{14} \\
& \quad - 908890277446267721597583360000it^9x^{16} - 45175176486008433672192000000it^7x^{18} \\
& \quad + 5078605192094849421017088000it^7x^{20} + 177526096599051062602629120000it^7x^{16} \\
& + 26231903255774124633802269523968000it^{25}x^2 + 342297333433095735591911628472320000it^{21}x^2 \\
& \quad - 16215119484413274827129125601280000it^{21}x^4 - 9322396457300067560386650439680000it^{21}x^6 \\
& + 226464613738450274921425498275840000it^{23}x^2 - 10499474947997371531042372976640000it^{23}x^4 \\
& \quad + 110315298314213807452323840000it^9x^{18} - 8715857820114190388428800it^9x^{26} \\
& \quad - 148448764770164128559923200it^{11}x^{24} - 1593404980586920754439782400it^{13}x^{22} \\
& \quad - 11868804176214003144500183040it^{15}x^{20} - 266246547151911911424000it^7x^{28} \\
& + 6389817349089724587377374003200000it^{15}x^8 + 56107620977017318721212252160000it^{13}x^{10} \\
& \quad - 74018468157868179633922375680000it^{13}x^{12} + 37280690843833713900681953280000it^{13}x^{14} \\
& \quad + 48243026527976085634217410560000it^{11}x^{12} - 10902208455765898661241815040000it^{11}x^{14} \\
& \quad + 2097868492701958252045271040000it^{11}x^{16} + 321950676862368497336869453824000it^{15}x^{12} \\
& + 13143047438973691263056955310080000it^{17}x^6 - 1872788723070122441857145241600000it^{17}x^8 \\
& + 1086118711882205459774674305024000it^{17}x^{10} + 55993158217452313538753200128000000it^{19}x^4 \\
& - 5473554208670333781702806077440000it^{19}x^6 - 2129400123998763522583261347840000it^{19}x^8 \\
& \quad - 393978418837264322831453257728000it^{15}x^{10} - 1428230923169793746927616000it^5x^{20} \\
& \quad + 182231043480357760401408000it^5x^{22} + 4942321068014944911360000it^3x^{24} \\
& \quad + 2031462368091062245785600000it^5x^{18} - 1200089453926809600itx^{34} \\
& \quad + 7418734806093004800it^3x^{32} - 11327366003901081845760000it^3x^{22} \\
& \quad + 1456617762622191697920000itx^{22} + 237549883224301240320000itx^{24} \\
& \quad - 9507936586815535841280000it^3x^{20} - 65963755169576024776114176000it^{17}x^{18} \\
& - 295458101549236503129253478400it^{19}x^{16} - 1153654289755375740948106444800it^{21}x^{14} \\
& - 52281692339772407826929732812800it^{29}x^6 - 62158588719209584432725255782400it^{31}x^4 \\
& - 44141341633992947685829430476800it^{33}x^2 - 4059972824910431180685941145600it^{23}x^{12} \\
& - 12320637217113300526845143285760it^{25}x^{10} - 29664573099192904243142983680000it^{27}x^8 \\
& \quad - 2142181495067608350720it^5x^{30} - 43236949334398003203035627520it^{25}x^{12} \\
& - 32299446070763337039929671680it^{25}x^{14} - 551960058360795226548228587520it^{27}x^{10} \\
& - 56114676712486862314820075520it^{27}x^{12} - 1482275812375285041090841804800it^{29}x^8 \\
& - 68278335792570765322223616000it^{29}x^{10} - 2275409010059868092973554073600it^{31}x^6
\end{aligned}$$

$$\begin{aligned}
& -47339646149515730623408373760it^{31}x^8 - 2133898812152520447982200422400it^{33}x^4 \\
& + 2832286521765898413366312960it^{33}x^6 - 1129082691647499620434323701760it^{35}x^2 \\
& + 41984482557941552951077109760it^{35}x^4 + 38461974951039427193276989440it^{37}x^2 \\
& + 369435906932736itx^{40} + 29554872554618880it^3x^{38} + 5865199924311182278656it^{11}x^{30} \\
& + 58651999243111822786560it^{13}x^{28} + 469215993944894582292480it^{15}x^{26} \\
& + 20935891052923967084534169600it^{19}x^{18} + 55162564826717880975989145600it^{21}x^{16} \\
& - 4680371916583523208155627520it^{21}x^{18} + 79760559602785867370437017600it^{23}x^{14} \\
& - 13961497204251709617450516480it^{23}x^{16} - 552177703400611963207680it^{11}x^{28} \\
& + 141979432513769079570432000it^{13}x^{24} - 5542613928474067253329920it^{13}x^{26} \\
& + 1028131595438122357563064320it^{15}x^{22} - 42778916079528612640849920it^{15}x^{24} \\
& + 5450002512461762172939141120it^{17}x^{20} - 258599751610208611498721280it^{17}x^{22} \\
& + 973952452359812756275200it^9x^{28} - 40998519207767310336000it^9x^{30} \\
& + 3049903960641814784901120it^{17}x^{24} + 16266154456756345519472640it^{19}x^{22} \\
& + 71571079609727920285679616it^{21}x^{20} + 260258471308101528311562240it^{23}x^{18} \\
& + 14137168975845394061721600it^{11}x^{26} + 5236753980771532800it^3x^{34} \\
& - 1278248237987266560it^3x^{36} + 976829175879916584960it^5x^{32} \\
& - 72616321866698588160it^5x^{34} + 42646262462432422133760it^7x^{30} \\
& - 2152422258407783792640it^7x^{32} + 26954043769812418560it^7x^{34} \\
& + 458218744086811115520it^9x^{32} - 1236013710365367044407296000it^{19}x^{20} \\
& + 1123085157075517440it^5x^{36} + 780775413924304584934686720it^{25}x^{16} \\
& + 1921908711198288209069998080it^{27}x^{14} + 3843817422396576418139996160it^{29}x^{12} \\
& + 6150107875834522269023993856it^{31}x^{10} + 7687634844793152836279992320it^{33}x^8 \\
& + 7235421030393555610616463360it^{35}x^6 + 4823614020262370407077642240it^{37}x^4 \\
& + 2030995376952577013506375680it^{39}x^2 - 65805770922393600itx^{36} \\
& - 5541538603991040itx^{38} - 21212944836172185600itx^{32} \\
& - 15444549824224090909762702540800it^{21}x^{12} - 7632568926974509056000it^5x^{28} \\
& - 121754530052938137600it^3x^{30} + 13237501624287485755392000it^9x^{24} \\
& - 83330559414840018454393651200it^{17}x^{16} - 2135496646505306400837599232000it^{19}x^{14} \\
& + 401867327451515734248652800it^{11}x^{22} + 5086556838405655082355916800it^{13}x^{20} \\
& + 25852438384792656811130880000it^{15}x^{18} - 1822390385308493414400it^7x^{26} \\
& - 65679609891970644542822862028800it^{23}x^{10} - 365310252524231479413696783974400it^{27}x^6 \\
& - 501102268458389167267098132480000it^{29}x^4 - 448820561475591313729526326886400it^{31}x^2 \\
& - 185821084269058298524880338944000it^{25}x^8 - 1781184913849238098131214663680000it^{29} \\
& - 1236098226654234031630975185715200it^{31} - 14060356871129413671142796820480it^{35} \\
& + 12693721105953606334414848000it^{39} - 253572946242805728537854607360it^{37} \\
& + 406199075390515402701275136it^{41} - 200402074079873642284062238310400it^{33} \\
& - 582312415127830734946959360t^{16}x^{22} + 42352188056877527550708940800t^{18}x^{18} \\
& + 4461206888113542973787996160t^{24}x^{16} + 11209026792613700640398376960t^{26}x^{14} \\
& + 22670936310385070781990174720t^{28}x^{12} + 36354420568666567491566174208t^{30}x^{10}
\end{aligned}$$

$$\begin{aligned}
& +45139566440644005963025612800t^{32}x^8 + 41817877468425911867937914880t^{34}x^6 \\
& +27180430318123159563565793280t^{36}x^4 + 11043537362179637510940917760t^{38}x^2 \\
& +539566201623545739097826918400t^{30}x^8 + 921550020610531832465215979520t^{32}x^6 \\
& +9138653608566228875054206156800t^{34}x^2 + 966830160095454660592140288000t^{34}x^4 \\
& +591198160146252383519433031680t^{36}x^2 + 2032754815873112384471040t^{14}x^{26} \\
& +14376685446051712456458240t^{16}x^{24} + 82026364415156176583393280t^{18}x^{22} \\
& +380692222792533049677447168t^{20}x^{20} + 1442551066296549589490073600t^{22}x^{18} \\
& +1315871590749296394240t^8x^{32} - 1854683701523251200t^2x^{34} \\
& -227895775089131520t^2x^{36} - 42184962622881792000t^4x^{34} \\
& -2073987321006894612480t^6x^{32} - 53888758652974116372480t^8x^{30} \\
& -898325080077249596620800t^{10}x^{28} - 10498041106592184076861440t^{12}x^{26} \\
& -90127229196839619133440000t^{14}x^{24} - 101549768847628850675318784t^{40}x^2 \\
& -253874422119072126688296960t^{38}x^4 - 401967835021864200589803520t^{36}x^6 \\
& -452213814399597225663528960t^{34}x^8 - 384381742239657641813999616t^{32}x^{10} \\
& -256254494826438427875999744t^{30}x^{12} - 137279193657020586362142720t^{28}x^{14} \\
& -60059647224946506533437440t^{26}x^{16} - 21688205942341794025963520t^{24}x^{18} \\
& -6506461782702538207789056t^{22}x^{20} - 1626615445675634551947264t^{20}x^{22} \\
& -338878217849090531655680t^{18}x^{24} - 58651999243111822786560t^{16}x^{26} \\
& -8378857034730260398080t^{14}x^{28} - 977533320718530379776t^{12}x^{30} \\
& -91643748817362223104t^{10}x^{32} - 6738510942453104640t^8x^{34} \\
& -374361719025172480t^6x^{36} - 14777436277309440t^4x^{38} \\
& -369435906932736t^2x^{40} - 2852919586917590947866869760t^{18}x^{20} \\
& -10489757533115490019521331200t^{20}x^{18} - 27759545995008961606645186560t^{22}x^{16} \\
& -45969512204299105569079296000t^{24}x^{14} - 13956755653155003314303139840t^{26}x^{12} \\
& +166829522934218514821504040960t^{28}x^{10} + 27707693019955200t^2x^{38} \\
& +1836096457455697920t^4x^{36} + 61444580041052651520t^6x^{34} \\
& +20007277373390447443968t^{10}x^{30} + 228627036523314177638400t^{12}x^{28}),
\end{aligned}$$

$$\begin{aligned}
D(x, t) = & (121462888973612955113913644482560000t^{20} + 94537654042279934894166717235200000t^{18} \\
& +16252937702437484582525730816000000t^{16} + 9805423648517498549009645568000000t^{14} \\
& +3672157468224156665848528896000000t^{12} + 21332128333217619456000000x^{12} \\
& +11601827179611863040000000x^{14} + 3932976439367210188800000x^{16} \\
& +1133985667018943692800000x^{18} + 707271124818693980160000x^{20} \\
& +88648968947267503649373667983360000t^{22} + 161804815860907376640000x^{22} \\
& +58409809823636206689745549393920000t^{24} + 3116050765605001976242539331584000t^{28}x^2 \\
& +23093119135147622400000x^{24} + 2133482299428731345274352435200t^{36} \\
& +13291033995509760x^{36} + 10072835889947916624000000x^{10} \\
& +20026836170571804131250000t^2 + 10888453439972553060000000x^8 \\
& +7475214800851779227400000000t^4 + 8021458343018853810000000x^6)
\end{aligned}$$



$$\begin{aligned}
& +18072192448610190031680000000t^6 + 80429060925991181250000x^4 \\
& +288255777341510764407296000000t^8 + 180965387083480157812500x^2 \\
& +26708945776837274155858329600000t^{10} + 519519244124160x^{38} \\
& +89633538159414902728886845440t^{38} + 1867092791250438641571509934489600t^{30} \\
& +69931633115293286400x^{30} + 8259327114186084142196937719808000t^{28} \\
& +26590369766887902946198699376640000t^{26} + 594120989571609600x^{32} \\
& +315364416159744000x^{34} + 294067425509390107565690034585600t^{32} \\
& +64159410887247822300000000t^2x^4 - 111957252808979724300000000t^2x^2 \\
& +31142815803988284981674351001600t^{34} + 960293933293978128384000000t^2x^{10} \\
& -132506122827243410784000000t^2x^8 + 748489692780515568960000000t^2x^6 \\
& +11695926375914239033344000000t^4x^{12} + 51630769268674678849536000000t^4x^{10} \\
& +89424110534691401441280000000t^4x^8 - 67900192554611591032320000000t^4x^6 \\
& +998313079891434310080000000t^4x^4 + 7564265857109036663280000000t^4x^2 \\
& +15776879049053621452800000t^2x^{18} - 119076919384603145011200000t^2x^{16} \\
& +187885181646143815680000000t^2x^{14} + 680341459697530380288000000t^2x^{12} \\
& +848834975457657580879872000000t^6x^6 + 4110255945966244388751360000000t^6x^4 \\
& +416404209761764131156480000000t^6x^2 + 708618775142017164902400000t^4x^{16} \\
& -840251636564522434560000000t^4x^{14} - 1586986084906786494830592000000t^8x^2 \\
& +80434160738159540620492800000t^6x^{14} - 186962840836126122442752000000t^6x^{12} \\
& +350791225471574901522432000000t^6x^{10} + 134335172904754748129280000000t^6x^8 \\
& +60921626487686420870861527449600000t^{18}x^2 + 18315378812895833262524674867200000t^{16}x^4 \\
& +102817448717754853936727064576000000t^{16}x^2 - 3735536672399445680577734246400000t^{14}x^6 \\
& -388441643701022205897867264000000t^{14}x^4 + 34836525267081102400438665216000000t^{14}x^2 \\
& -294990095408936873523727564800000t^{12}x^8 + 21144689625774893695185715200000t^{12}x^6 \\
& +1342569987536088015694725120000000t^{12}x^4 + 9104071459689094366598529024000000t^{12}x^2 \\
& +60287229757947398671596257280000t^{10}x^{10} - 71490651801908749987007692800000t^{10}x^8 \\
& +358131686186596444493001523200000t^{10}x^6 + 100155715204425165667565568000000t^{10}x^4 \\
& -501106709929274941281140736000000t^{10}x^2 + 5430273073229572585449062400000t^8x^{12} \\
& +7029884218031297562201292800000t^8x^{10} + 4532398039471477816295424000000t^8x^8 \\
& +9030533868710745709215744000000t^8x^6 + 5828861384325563198275584000000t^8x^4 \\
& +2056382819164484226175205376t^{40} + 23089744183296x^{40} + 4398046511104x^{42} \\
& +19342813113834066795298816t^{42} - 155532989696642729902080t^{10}x^{26} \\
& +4624173302020412626742280192000t^{28}x^8 + 7692422509798564361512880701440t^{30}x^6 \\
& +8906766657607955147189649408000t^{32}x^4 + 2058245621187256415713178419200t^{26}x^{10} \\
& +186648239032841056095830016000t^{22}x^{14} + 702370714222287966351812198400t^{24}x^{12} \\
& +38524261286006536729924730880t^{20}x^{16} + 830805200433869488128000t^{12}x^{24} \\
& +19419629345361100800t^4x^{32} - 88442956119696998400t^6x^{30} \\
& -12219092621800243200000t^8x^{28} + 46371793646940589758873600t^{14}x^{22} \\
& -2697387532000929170797363200000t^{14}x^{14} + 28876804363165060911071232000t^{14}x^{16}
\end{aligned}$$

$$\begin{aligned}
& +56829188844642993916870656000t^{14}x^{18} + 12863543457321089775721827532800000t^{16}x^6 \\
& +1284562789522580451354476544000000t^{16}x^8 + 260312228549486582307760373760000t^{16}x^{10} \\
& -4405660387524677485524418560000t^{16}x^{12} - 4288801766427224085507342336000t^{16}x^{14} \\
& +40455932657724327818987097292800000t^{18}x^4 + 19925337192920352081977750323200000t^{18}x^6 \\
& +45760681927052444235687526400000t^{18}x^8 + 3643894751364567984085401600000t^{12}x^{14} \\
& -292085023149255531215978496000t^{12}x^{16} + 71186431760663987349356544000t^{12}x^{18} \\
& +3734139358041821340814540800t^{12}x^{20} + 1761944289373158958952349696000000t^{14}x^8 \\
& +267373483487109126151030702080000t^{14}x^{10} + 25159947500789794169652510720000t^{14}x^{12} \\
& +172157668824188616584126791680000t^{12}x^{10} + 32068248131267736673022115840000t^{12}x^{12} \\
& +368404647701690338586394624000t^{10}x^{16} - 2295963211679982289944576000t^{10}x^{18} \\
& +4232691991847276125146316800t^{10}x^{20} + 157352538270124324631347200t^{10}x^{22} \\
& -31980191244095515157394295357440000t^{22}x^2 + 34534936785834022537771823923200000t^{22}x^4 \\
& +6536462007456578404383675383808000t^{22}x^6 + 342130184183092637503793922048000t^{22}x^8 \\
& +10856203874861428872202892083200t^{22}x^{10} - 742268668480789473023659868160000t^{24}x^2 \\
& +14526828401811079008028238807040000t^{24}x^4 + 1787222867366445406442219372544000t^{24}x^6 \\
& +92071972531818619699269206016000t^{24}x^8 + 7019595923832916022361996656640000t^{26}x^2 \\
& +3648008162636396412554547560448000t^{26}x^4 + 343864818302012316956699394048000t^{26}x^6 \\
& +16716993992988126079164088320000t^{10}x^{12} + 2523551246339044311407001600000t^{10}x^{14} \\
& +119508725048133376351659884544000t^{18}x^{10} - 23870477918779431749595168768000t^{18}x^{12} \\
& +1289649279612910746118127616000t^{18}x^{14} - 4048034951690653322202537000960000t^{20}x^2 \\
& +41305449926112714726330020659200000t^{20}x^4 + 15085899823696223162390563258368000t^{20}x^6 \\
& +865636725666914269306697023488000t^{20}x^8 - 18844182928440318306122779852800t^{20}x^{10} \\
& +1858588673501596499770657996800t^{20}x^{12} + 647591200264023821608437153792000t^{28}x^4 \\
& +639672080962623609632348071526400t^{30}x^2 + 7316395404151027138560000t^2x^{20} \\
& +1079518545924902092800000t^2x^{22} + 91939228359642316800000t^2x^{24} \\
& -29735889790316838912000t^2x^{26} + 1658936156076638208000t^2x^{28} \\
& +264046954624214630400t^2x^{30} + 277719919821324288000x^{28} \\
& +2602547308142788608000x^{26} + 520666510730106735113011200000t^8x^{14} \\
& +2967652584139457455718400000t^8x^{16} + 9907008973268534584934400000t^8x^{18} \\
& -1057912045110554643136512000t^8x^{20} + 109550710205924732043264000t^8x^{22} \\
& +11092996319640910036992000t^8x^{24} + 21711089220782970529382400000t^6x^{16} \\
& +1333650851307767778508800000t^6x^{18} + 308200319155218205900800000t^6x^{20} \\
& -65676639587066896711680000t^6x^{22} + 1568799755546822443008000t^6x^{24} \\
& +32785352890867775360000t^6x^{26} + 380398138248276423475200000t^4x^{18} \\
& +54773375791185631641600000t^4x^{20} + 8454122966951909130240000t^4x^{22} \\
& -2042367037914155581440000t^4x^{24} + 24627676640899497984000t^4x^{26} \\
& +9188048507825553408000t^4x^{28} + 14789738781632102400t^2x^{32} \\
& +525639180819942604800t^4x^{30} + 16308124688452681728000t^6x^{28} \\
& +246886766423473913856000t^8x^{26} + 6389363531939347169280000t^{10}x^{24}
\end{aligned}$$

$$\begin{aligned}
& +171416692930800481468416000t^{12}x^{22} + 2689023734168603609530368000t^{14}x^{20} \\
& +403583415082537113240993792000t^{16}x^{16} + 26009896265605858335916032000t^{16}x^{18} \\
& +2154349846231906640625 + 674120776546396850356224000t^{16}x^{20} \\
& +170487818456707150066483200000t^{18}x^{16} + 824104538643404730610483200000t^{20}x^{14} \\
& +3190530548022051252724354252800t^{22}x^{12} + 10470537786849459916081043865600t^{24}x^{10} \\
& +28740632513159451112667873280000t^{26}x^8 + 60912221983103393139076890624000t^{28}x^6 \\
& +89432936845822803438402011136000t^{30}x^4 + 78916367221302480288978095308800t^{32}x^2 \\
& +44044496389822028238028800t^{16}x^{22} + 6027751534210401769095168000t^{18}x^{18} \\
& +418639448913360682053795840t^{24}x^{16} + 1763857007974744770824110080t^{26}x^{14} \\
& +5196740001990108249524797440t^{28}x^{12} + 11308915469050980093369778176t^{30}x^{10} \\
& +18283421028899504936284323840t^{32}x^8 + 21492056547517699724956139520t^{34}x^6 \\
& +17437999369303766701902397440t^{36}x^4 + 8758667563107988370746245120t^{38}x^2 \\
& +391750298587119499897303203840t^{30}x^8 + 550530899077293867881925181440t^{32}x^6 \\
& +6389982016100992830288376627200t^{34}x^2 + 535114721888049703907701555200t^{34}x^4 \\
& +321131310041398187750798131200t^{36}x^2 - 273194838579757700874240t^{14}x^{26} \\
& -1414593613323999620628480t^{16}x^{24} - 4762130745563535365898240t^{18}x^{22} \\
& -4944054841461468177629184t^{20}x^{20} + 53935143725034198301409280t^{22}x^{18} \\
& -284879416553971384320t^8x^{32} + 545495206330368000t^2x^{34} \\
& +11775769533480960t^2x^{36} + 2618376990385766400t^4x^{34} \\
& +143137942141088563200t^6x^{32} + 3749981339475152732160t^8x^{30} \\
& +61087084302631981547520t^{10}x^{28} + 701227890912144151019520t^{12}x^{26} \\
& +6154544491010705483366400t^{14}x^{24} + 101549768847628850675318784t^{40}x^2 \\
& +253874422119072126688296960t^{38}x^4 + 401967835021864200589803520t^{36}x^6 \\
& +452213814399597225663528960t^{34}x^8 + 384381742239657641813999616t^{32}x^{10} \\
& +256254494826438427875999744t^{30}x^{12} + 137279193657020586362142720t^{28}x^{14} \\
& +60059647224946506533437440t^{26}x^{16} + 21688205942341794025963520t^{24}x^{18} \\
& +6506461782702538207789056t^{22}x^{20} + 1626615445675634551947264t^{20}x^{22} \\
& +338878217849090531655680t^{18}x^{24} + 58651999243111822786560t^{16}x^{26} \\
& +8378857034730260398080t^{14}x^{28} + 977533320718530379776t^{12}x^{30} \\
& +91643748817362223104t^{10}x^{32} + 6738510942453104640t^8x^{34} \\
& +374361719025172480t^6x^{36} + 14777436277309440t^4x^{38} \\
& +369435906932736t^2x^{40} + 269650932253973825055621120t^{18}x^{20} \\
& +1442137173241003254459924480t^{20}x^{18} + 6670904798520590070794158080t^{22}x^{16} \\
& +25936458820714974771412992000t^{24}x^{14} + 82064395606244341723221196800t^{26}x^{12} \\
& +204983947865102952783182561280t^{28}x^{10} - 5541538603991040t^2x^{38} \\
& -432240011111301120t^4x^{36} - 14275003443880919040t^6x^{34} \\
& -3877977581534696177664t^{10}x^{30} - 38008038983200753582080t^{12}x^{28}).
\end{aligned}$$

**4. Case N=7**  
 The polynomials  $N$  and  $D$  are defined by

$$\begin{aligned}
 N(x, t) = & (-8070450532247928832t^2x^{54} - 43068613078887044863482311983969075200000t^{32}x^{16} \\
 & - 15076615544015608998427454590848860160000t^{12}x^{24} - 377697084909203069337600t^8x^{48} \\
 & - 1136646176327005412887390517503432316682240000t^{22}x^{14} - 2891527950737450115494145281095289599426560000t^{24}x^{12} \\
 & + 8554173337526502774210040745164800t^{12}x^{34} - 265780695446251489235404780851953664t^{50}x^6 \\
 & - 3434156533907357467410432000x^{40} - 435804328741388156928t^4x^{52} \\
 & - 65930905183814521057131724800000000x^{20} - 6799085312384788832515448846334948613816320000000t^{20}x^2 \\
 & - 34852041516794876250611548107571200t^{20}x^{32} - 204067461579070286775551543552556977356800t^{40}x^8 \\
 & + 19024621613829436965209564103699177293217792000000t^{24}x^2 + 3927271140908843217689575400265312790118400000t^{22}x^{12} \\
 & - 807606705611287799091005843449892044800t^{24}x^{22} - 221056641752590059945074019115121409785856000000t^{20} \\
 & + 6569722279196912274081249765202329600t^{22}x^{28} + 199631685623657621546004755874291709378560t^{46}x^2 \\
 & - 106246504639942273514938705234624512000t^{22}x^{26} - 37814641105237151691062743111360629964800000000t^{14} \\
 & - 26176376202642818947935931371356160000t^8x^{28} - 276517622769942239440161198157100954419200000000t^{16} \\
 & + 93598013649391515859333939200000000x^{22} - 4927445240833970180863953185188981914992640000000t^{22}x^2 \\
 & - 80518853651215468263365284686232289280t^{32}x^{20} + 867015399768915871771051087468701941760t^{30}x^{20} \\
 & + 741307082468414418091019914444800000t^4x^{26} + 11751918354917692838957403489277395232358400000t^{20}x^{12} \\
 & + 76760816449346355813333073920000t^2x^{34} + 10361151603802269814546759680000t^2x^{36} \\
 & - 341127093482893460782448640000t^2x^{38} - 40253969440424227750753075200t^2x^{40} \\
 & - 1792083404790335476334592000t^2x^{42} - 917553283967174160622288896000t^4x^{38} \\
 & - 63767820503562066231872716800t^4x^{40} + 57744544297701817386147055140864000t^6x^{32} \\
 & + 1721929822561125752435223035904000t^6x^{34} - 11496630594497048721821270016000t^6x^{36} \\
 & - 2005151456991371539167313920000t^6x^{38} + 1730192277325160561260768744439808000t^8x^{30} \\
 & + 54543304839511787603403894423552000t^8x^{32} - 296714802229649176097099612160000t^8x^{34} \\
 & - 56161958954859041039277096960000t^8x^{36} + 42549852632585961044528116625571840000t^{10}x^{28} \\
 & + 1111336933916994424218899642843136000t^{10}x^{30} - 19052067594911398932083405488128000t^{10}x^{32} \\
 & - 2066788655192891725269067785830400t^{10}x^{34} + 958801867109247405428302715226685440000t^{12}x^{26} \\
 & + 15032677688862208912114388482129920000t^{12}x^{28} - 802173269621641921509115835921203200t^{12}x^{30} \\
 & - 55599972485720016515508838858752000t^{12}x^{32} + 1924425691855437414575092526418493440000t^{14}x^{24} \\
 & - 15324556119401902038798749304619008000t^{14}x^{26} - 20248904357762867980597712935452672000t^{14}x^{28} \\
 & - 1060483108643859319406896561835212800t^{14}x^{30} + 359811831459621683826611104463934455808000t^{16}x^{22} \\
 & - 7168255939745096556471528133012488192000t^{16}x^{24} - 289996411970095347002557700203610112000t^{16}x^{26} \\
 & - 16984340773434826227044139833229312000t^{16}x^{28} - 25602598406970861317971922177532132065280000t^{18}x^{18} \\
 & + 4521681678088434814443366043472306896896000t^{18}x^{20} - 69586700325078493230886125099596906496000t^{18}x^{22} \\
 & - 4468284514311087700343704191919718400000t^{18}x^{24} - 247247175376032865998646737874452480000t^{18}x^{26} \\
 & + 26887536110314706596862819104646202654720000t^{20}x^{18} + 668505033876919752251545955325437804544000t^{20}x^{20} \\
 & - 65879856235435934974240501887878037504000t^{20}x^{22} - 3084614246807651196969125775745115750400t^{20}x^{24} \\
 & + 5541086631546164846454638974919277281280000t^{22}x^{16} + 15241240763331555791563563772917401518080000t^{22}x^{18}
 \end{aligned}$$

$$\begin{aligned}
& -616630714113817749533672282673604932403200t^{22}x^{20} - 30466011427500062419564118935886364672000t^{22}x^{22} \\
& -645405370360703817901875628544877605683200000t^{24}x^{14} + 108318062218803282175504491962689690533888000t^{24}x^{16} \\
& -3234617593335742841397832063192041259008000t^{24}x^{18} - 229457776793928093223793600133258333388800t^{24}x^{20} \\
& -3147489060092735583720807020951788698206208000t^{26}x^{12} + 385374887897418183503250178378328149327872000t^{26}x^{14} \\
& -8024208623808708813673203999202709864448000t^{26}x^{16} - 1307711860978664533989441844850360057856000t^{26}x^{18} \\
& -7954043214806271756795724912895529389654016000t^{28}x^{10} + 642695120627212308383434675932699857780736000t^{28}x^{12} \\
& +418563473761542272925098970927952035840000t^{28}x^{14} - 5670815733516255178410242328286294179840000t^{28}x^{16} \\
& -19998939153950980796613587759415384877301760000t^{30}x^8 - 368720062311634145743398617038203679408128000t^{30}x^{10} \\
& +37766970636227766570718646913378790932480000t^{30}x^{12} - 18967919626763053032804243964658897544806400t^{30}x^{14} \\
& -54547008092243958320599222371116307500236800000t^{32}x^6 - 5372586083011658254267274267761965803765760000t^{32}x^8 \\
& -5453533234491254074045973626639753622323200t^{32}x^{10} - 50081917113335147121363685101624184799232000t^{32}x^{12} \\
& +128334746452943396675881364359442079437291520000t^{34}x^2 - 6643155272761555442386141331755883676303360000t^{34}x^4 \\
& -1562433137415684439941872206696403656114176000t^{34}x^6 - 759907487079096493458156902245566171316224000t^{34}x^8 \\
& -107687202838726341123059844961424645082316800t^{34}x^{10} - 19427811458102402706402774712253429751742464000t^{36}x^2 \\
& -22051443831496624747845067782354745933430784000t^{36}x^4 - 2209242750844028492261387831170438501761024000t^{36}x^6 \\
& -192392719636271892089953555758494055923712000t^{36}x^8 - 14695854256595397403186419314213306071252992000t^{38}x^2 \\
& -3197924997032330714828279368542521162465280000t^{38}x^4 - 277810317422996522191543137707399388856320000t^{38}x^6 \\
& -2455013783146632880376500975639313761959936000t^{40}x^2 - 294442696990945022657555892501241043248742400t^{40}x^4 \\
& -193220416350281810531746518720517087690752000t^{42}x^2 + 1318119736151959927664305766400000t^4x^{34} \\
& +25056645110565418727632797696000t^4x^{36} + 82588276423391796709488705396119961600t^{42}x^{12} \\
& +38713254573464904707572830654431232000t^{38}x^{16} + 9014446441468047421089798954449633280t^{34}x^{20} \\
& +20282035869553810167642259240412774400t^{36}x^{18} + 1114600286622282673954008629866659840t^{30}x^{24} \\
& +3422018423840341542841254565380096000t^{32}x^{22} + 15650302513793625508430737645240320t^{24}x^{30} \\
& +75365881953626569693527630308966400t^{26}x^{28} + 312327078366380378910114503983104000t^{28}x^{26} \\
& -100532528565119136857488007689666560000t^{34}x^{18} + 3925884380854996742890029495110074368000t^{34}x^{16} \\
& +19934640346705730460820853108401766400t^{36}x^{16} + 8521482700632185798393023582767635496960t^{36}x^{14} \\
& +18725268666598883253284442583162190561280t^{38}x^{12} + 481097505479177944221951152388833280000t^{38}x^{14} \\
& +1408367371754034615881578915548050227200t^{40}x^{12} + 36583353224455595953063597516883188776960t^{40}x^{10} \\
& +1972690926499915744734387723263016960000t^{48}x^4 + 25688896953668214176786887324870775930880t^{48}x^2 \\
& +3092519712732521121727569095662397030400t^{46}x^6 + 52345775106488469900835895996542259036160t^{46}x^4 \\
& +3335283684153244901146431995768733696000t^{44}x^8 + 6569749445148391292156951337720015257600t^{44}x^6 \\
& +2575457914606369543095713192500411760640t^{42}x^{10} + 56948435931103688500690271045049070387200t^{42}x^8 \\
& +780456067635282287753109178233944801280t^{50}x^2 + 74740442379148068913152t^4x^{50} + 3508224846368174663270400t^6x^{48} \\
& +107207864870381486604288000t^8x^{46} + 817133116390102794240t^2x^{52} + 55059858239490959707195047936000t^{18}x^{36} \\
& +6000884754809865704246240870400t^{16}x^{38} + 543636125953142114128798679040t^{14}x^{40} \\
& +40222299038589175110775603200t^{12}x^{42} + 2370357176197559841057669120t^{10}x^{44} \\
& +89435044293687997370809120172078530560t^{44}x^{10} + 76811259879869195416650336004630118400t^{46}x^8 \\
& +50313052323058424945404150221373440000t^{48}x^6 + 23598259055295060111535843715259039744t^{50}x^4 \\
& +7053410763765904906631896107224924160t^{52}x^2 + 62092745439421630645344948690018631680t^{40}x^{14}
\end{aligned}$$

$$\begin{aligned}
& +30331476608799363915819953789337600000t^6x^{24} - 977617026627092111385012822500966400000t^6x^{22} \\
& - 13312130907956451884350800125755392000000t^6x^{20} + 3085837375839312109967289285083136000000t^6x^{18} \\
& - 98568298005563739832435890381127680000000t^6x^{16} - 34019460365442191342363513859342336000000t^6x^{14} \\
& - 679720599137884880548349855253135360000000t^6x^{12} + 2258684189478846380081511491921510400000000t^6x^{10} \\
& - 3499312897546982259204657020977152000000000t^6x^8 + 19124238877807217435176512231014400000000t^6x^6 \\
& + 451541130384353698548897671067033600000000t^6x^4 + 163736451751879621664897404042425139200000000t^{10}x^6 \\
& + 74737333329250121751489995239430553600000000t^{10}x^4 + 246012542264732383204793124893392896000000000t^{10}x^2 \\
& + 133184180352646781394353563631616000000t^8x^{26} + 421346886202453058478278008897536000000t^8x^{24} \\
& + 2456350383299718343998444478975180800000t^8x^{22} - 17766148723193060717054863505935564800000t^8x^{20} \\
& - 362601652651442038552121482879696896000000t^8x^{18} + 1893250265196671339135620417899724800000000t^8x^{16} \\
& - 1614510361814803549605458058254745600000000t^8x^{14} - 9878182151005601057171395110324142080000000t^8x^{12} \\
& - 32108595684829093012852000330528849920000000t^8x^{10} + 66607164466355386124892008130399436800000000t^8x^8 \\
& - 9329482905869420947404861972774912000000000t^8x^6 - 1517025590706808075195359193264128000000000t^8x^4 \\
& + 146582326012976041997955243527958528000000000t^8x^2 + 172690371049998812301263949004800000t^6x^{28} \\
& + 1041093520378923558953757775923200000t^6x^{26} + 20555608285598186935908754400165127782400000t^{18}x^{16} \\
& + 17197952439413691233224450804810986291200000t^{18}x^{14} + 13979923001026574251063852291420968085094400000t^{18}x^{12} \\
& - 30887101301249284211239079390147395348070400000t^{18}x^{10} + 68765021402825862245009709886946962046976000000t^{18}x^8 \\
& + 305256057220119001592560069095408952934400000000t^{18}x^6 + 402385199563783766753709764528004975820800000000t^{18}x^4 \\
& - 5611775087280688040839976347055023686942720000000t^{18}x^2 + 20499623783674586750082705267942752256000000t^{16}x^{18} \\
& + 92613104747764495287685081325708614041600000t^{16}x^{16} + 927385444838833435116440521886365699276800000t^{16}x^{14} \\
& + 793166733010008142292670235406259506380800000t^{16}x^{12} - 3327829913812159750570870238456466898944000000t^{16}x^{10} \\
& + 107662501548407955258607175850084186193920000000t^{16}x^8 - 7107863666875556172495089499424520404992000000t^{16}x^6 \\
& - 1138650650631625849175232095273745635082240000000t^{16}x^4 + 365831750148184584601156923447436703170560000000t^{16}x^2 \\
& + 1406462208360857852823858705944291573760000t^{14}x^{20} + 1954086433217636311059516894194801049600000t^{14}x^{18} \\
& + 73939232021962802223636949860973176422400000t^{14}x^{16} + 49911179205093189228865718482649481216000000t^{14}x^{14} \\
& - 5162338142346884943357152493412961746944000000t^{14}x^{12} - 505669318750452744154326557671506837504000000t^{14}x^{10} \\
& - 45465779495158491027677149529557507768320000000t^{14}x^8 - 169511355667578878666489158256317830266880000000t^{14}x^6 \\
& - 7006039966436139914384397773616988160000000000t^{14}x^4 - 4521593391330257914070329495393193164800000000t^{14}x^2 \\
& + 79740117842986476352200866031835545600000t^{12}x^{22} - 50101046513175945400105046482731663360000t^{12}x^{20} \\
& + 3382787158802557455753390743730782208000000t^{12}x^{18} + 18280948883938426282539592942073413632000000t^{12}x^{16} \\
& - 280007405811154623614301703863256743936000000t^{12}x^{14} + 240604527324712139708698415906401812480000000t^{12}x^{12} \\
& - 1991700794238637684139918157677315751936000000t^{12}x^{10} - 7362468865338300316529174164622907801600000000t^{12}x^8 \\
& - 21722537016593350522348762543085007667200000000t^{12}x^6 - 5000189694532837755996628592962515763200000000t^{12}x^4 \\
& - 20404679988020032216399142397542400000000000000t^{12}x^2 + 7813272172241574861402034667520000t^2x^{30} \\
& + 3972380916137611024183534800265543680000t^{10}x^{24} + 2921907944229670592713004140619366400000t^{10}x^{22} \\
& + 112213452910465755904385683373948928000000t^{10}x^{20} - 143441619615680077134503868635283456000000t^{10}x^{18} \\
& - 10679848175258033946895460449784954880000000t^{10}x^{16} + 43261122841068114214994306468337942528000000t^{10}x^{14} \\
& - 110080960622699133128048288815959244800000000t^{10}x^{12} - 220964382709533829376447711752004567040000000t^{10}x^{10} \\
& - 1755533122669028255492221326280831795200000000t^{10}x^8 - 11874907871036288642796401169000000000t^2x^4
\end{aligned}$$

$$\begin{aligned}
& -9109624140013844066557739051250000000t^2x^2 + 76017737444078202240471720837120000000t^2x^{14} \\
& + 79736490295523107050001181184000000000t^2x^{12} + 1220701152802998302466265934899200000000t^2x^{10} \\
& + 144255354872577436521967725792000000000t^2x^8 - 54951607293147082021344845004000000000t^2x^6 \\
& - 2792662974201240678568487288832000000t^2x^{24} - 8809737250013365336544945111040000000t^2x^{22} \\
& - 36011656349811250855846899351552000000t^2x^{20} - 12950319567015883276211699712000000000t^2x^{18} \\
& - 21146188346668858610174349312000000000t^2x^{16} + 12025826913262916080949517216921600000000t^4x^6 \\
& - 562443335146990742411946699720000000000t^4x^4 + 1121217977734480055380025959884000000000t^4x^2 \\
& + 781195593111639670337096908800000t^2x^{32} + 2012957709341195371712348160000000x^{28} \\
& + 94326842473308240310016409600000x^{30} + 10896266795918179849433461555200000t^2x^{26} \\
& - 246249448051397558996181919759073280t^{40}x^{16} - 2295071284242528031574900966400000000x^{16} \\
& - 251006489902176309535078888243200000000t^4x^{14} + 104632424104017100379458948300800t^{12}x^{38} \\
& + 91697287368541552663096152186781219946496000000t^{28}x^6 - 14677610877239558636914606080t^{16}x^{40} \\
& - 1180001074995080782984131675637112473072435200000t^{28}x^2 - 1060077181760938058575426004975616000t^{24}x^{28} \\
& + 77638285363402987208103298994890376793292800000t^{22}x^4 + 3007780292997585399936175112369243368194048000000t^{28}x^4 \\
& - 2120853821804055494371257090048000000t^4x^{24} + 15208361034638927884111765831680000t^4x^{30} \\
& - 361688645021997898703831040000x^{36} - 1482507482734996795638392832000000000x^{18} \\
& - 4310633948980877849361337730578657163870208000000t^{24} - 3337755137036845081451707760640t^{12}x^{40} \\
& - 3255530370171543850277928960000x^{34} - 207253773341569785450992532325747528826880000t^{20}x^{16} \\
& + 8206592685064809554157668844965261555112345600000t^{26}x^2 - 415282336634767951930319970081177600t^{48}x^8 \\
& - 498338803961721542316383964097413120t^{46}x^{10} + 1589447394617759760668957658316800t^{14}x^{36} \\
& - 7251784030256698931281920t^{10}x^{46} + 1687355258591643252127166436065280000000t^4x^{10} \\
& - 3301691491044863068078080000x^{38} - 20189571827307336695808000t^4x^{44} \\
& + 2184600484438689428711551171155332941479936000000t^{20}x^4 + 8042413446440140452387397354693774540800000000t^{12} \\
& - 237937943955585479350388706562500000x^4 + 19095743744614287388005102489186432000000000t^8 \\
& - 22031291106998655495406361718750000x^2 + 13595326725434332126207488591773696000000000t^{10} \\
& - 1377589267270548451843659936000000000t^{12} + 2541894757465615879605474037976098846801920000000t^{24}x^4 \\
& + 26683614483157446085595451359232000000t^4x^{20} - 6490172664263019382722967633920t^{22}x^{34} \\
& + 73521565751355513196098944250000000x^6 + 5950157387792259812810713753680000000000t^6 \\
& + 34959853708136060655110455296000000x^{24} + 4883405030049591504031036464000000000x^{10} \\
& - 1991628716072678456784735099375000000t^2 + 2288456650860304786697448112500000000x^8 \\
& - 246199216512705828522669997978500000000t^4 + 2442130840324008532655235245970074242960588800000t^{24}x^6 \\
& - 12878733521788446086355922905040371119554560000t^{28}x^8 - 1254039043495696230893285151866880000000t^4x^{18} \\
& - 5320536741701382293658945776517120000000t^4x^{16} + 777163948235445471817574456966790437142528000000t^{22}x^8 \\
& + 30245042178759872393494569622595174400t^{24}x^{26} + 44166672807819296677597462677194227958415360000t^{22}x^{10} \\
& - 962479069929916995139220275200t^8x^{38} - 2009214275152668387523134750720000t^4x^{32} \\
& + 85324187823651756379210123734220800000000t^4x^{12} - 64049606799956771025715200t^2x^{44} \\
& + 120255718942369526807127873159926316741427200000t^{20}x^{10} - 8107806009733186766021591040t^6x^{42} \\
& + 424926913373607699642214577280437452800t^{22}x^{24} - 8933821654096062133411564883183943234355200000t^{22} \\
& - 5192296858534827628530496329220096t^{56} - 72057594037927936x^{56} - 25159416590054563816616151220224000t^{14}x^{34}
\end{aligned}$$

$$\begin{aligned}
& -19276837206154442257262125984933478400t^{20}x^{28} + 8340396601251567453647929344000000x^{26} \\
& - 2518358868430052917248000t^4x^{48} + 22629831928724883847364807986092441600t^{18}x^{28} \\
& + 826024229946647700758681902798489748766720000t^{20}x^{14} - 110227852679706574848000t^2x^{48} \\
& - 673908116912234381560985579638655601868800t^{30}x^{16} + 10531560150320063745225023007293338363625472000000t^{26} \\
& + 144945035611779285720812047649810153472t^{52} + 1008603664770390266842048911951003648t^{54} \\
& + 1513209474796486656x^{54} - 91038688585228411187547340800t^6x^{40} \\
& + 181234510897965362463658475520000t^{10}x^{36} - 6152645220830790844521465726785108626636800t^{34}x^{12} \\
& + 19131607876418666496000x^{48} + 4768174554719914393249632773293718423941939200000t^{30} \\
& + 10726247747613998728569139077416750987555635200000t^{28} - 4737487308501655451090917785600000t^{18}x^{34} \\
& - 375237254173558185137039115823349760t^{42}x^{14} - 143185481585575756692646144967408458137600t^{28}x^{18} \\
& - 1754601852401813024168364725352467005440t^{26}x^{22} - 477574687129983144719867965593354240t^{44}x^{12} \\
& - 18402620193948925077802468967385943297228800t^{38}x^8 - 15504467864005292457354854400000x^{32} \\
& - 5211071213296441966559702292073807872000t^{42}x^6 + 2278024212426497028269248550933852956341043200000t^{26}x^6 \\
& - 253550391186971505926849545423014466682880t^{38}x^{10} - 1397867702594243679706152960t^{14}x^{42} \\
& - 775967896562435724000284481945600t^{28}x^{28} + 34212139623969339066772517901836885919006720000t^{30}x^6 \\
& + 166639267264852228796860279014737031179796480000t^{32}x^4 + 697687050849109282132038528930350603698176000000t^{20}x^6 \\
& + 2521371585122835296849473336403558400t^{16}x^{30} + 2526448123112040983754178560t^6x^{44} \\
& + 189751825460727399433514114136890949186355200000t^{32}x^2 + (5887594456084106411413340160t)^7x^{44} \\
& + (3008162172857349876524474732001330462720000000t)^{13}x^8 - (952319337509281478168275443473448960000t)^{11}x^{26} \\
& + (600989078623090441128883316903116800000t)^{13}x^{26} - (17207980609506731797640898962836684800000t)^{13}x^{24} \\
& + (1694708644895984664668461529741779795968000t)^{25}x^{18} + (101290655839466196814090379968068452352000t)^{19}x^{22} \\
& - (31632562272357380718910934876160000t)^5x^{32} - (14565848579952793462354140067497246720t)^{31}x^{22} \\
& + (163154779223409688920718708309227605065728000t)^{29}x^{12} - (42259794166548023379806134216949760000t)^9x^{28} \\
& + (274732522712588597392834560000t)x^{38} + (88125164427994621981625446875000000t) \\
& - (33390506343599704575788622486396532162560t)^{49} - (14623741571365507556265159870000000000t)^3 \\
& - (185257184233438848065529075324183285596160000000t)^{19} + (6492866051866744998395158785856676403609600000000t)^{17} \\
& + (1226152887223993301054589396911904522240000000000t)^{15} - (40746020553719226734338201612132025326632960000000t)^{23} \\
& - (39900988964553018474170079791409197481984000000000t)^{21} + (14729999287831603031466574788773384099463168000000t)^{31} \\
& + (7663864266035230555123711130147168037371904000000t)^{29} - (70497235614292785730614092296660462300299264000000t)^{27} \\
& - (166768734313883594682448799490283835479818240000000t)^{25} + (39252015268834729832956015594611041894400000000t)^{13} \\
& + (1220312047912197583368952785955134931143229440000t)^{33} + (525563831774557031271082002749325312000000000t)^{11} \\
& + (26311740978560954630220200813543424000000000t)^9 - (2943771932157360451336577582498304000000000t)^7 \\
& - (32046647222683262421151403343840000000000t)^5 + (451583843241701115252001183394276604137963520000t)^{35} \\
& - (271019641846874715705910355859131596800t)^{51} - (1083411319880344822246884219046636384419840t)^{47} \\
& + (145384312038975173598853897218162688t)^{55} + (8423203578758124120383597670077300736t)^{53} \\
& - (16814034402400041805178128541490523353907200t)^{45} + (10687174634670548005232320665223092234092544000t)^{39} \\
& + (91556538318805916060015778606094953486483456000t)^{37} + (241472400591417991014652475071613701718016000t)^{41} \\
& - (113332473797985544574242518195200906074521600t)^{43} - 5346000740287695583696146923520000t^6x^{30}
\end{aligned}$$



$$\begin{aligned}
& +187371252726865203139969279013683200t^{14}x^{32} - 1192526067541619033520136519680t^8x^{40} \\
& - 248719993709629628899143885422707813122048000000t^{18} - 991554157040183516804897832960t^{20}x^{36} \\
& - 18689215025642539453035032195572765084876800000t^{26}x^8 + 112989848685003374689420656723005276160t^{26}x^{24} \\
& - 4384926053700850691648895625828761600t^{26}x^{26} - 12309974997505394081219612648295038661427200t^{36}x^{10} \\
& + (2509285533194095931739340800000t)x^{36} + (90135985214209184915884152435358537089024000t)x^{35}x^8 \\
& + (2444811316837823222063824896000t)x^5x^{38} + (2963122353026998367248516644864000t)x^7x^{34} \\
& + (1777843015046783078871758788362240000t)x^{11}x^{30} + (85050975409873887152522133504000t)x^7x^{36} \\
& - (3398199981265498180809634523791912599552000t)x^{17}x^{20} + (9714444011522605712773491859814004817920000t)x^{27}x^{16} \\
& + (1824419086337215431122689225550565048582144000t)x^{39}x^2 - (302396654146585777893474296438033618042880000t)x^{39}x^4 \\
& - (123580340902174263498156702787694795685888000t)x^{37}x^6 + (11799993762391771802238661687246848000000t)x^5x^{14} \\
& + (59400824349241206986426814645039028764672000t)x^{25}x^{16} + (44483181129407026066902434468417821999104000t)x^{31}x^{10} \\
& - (10308244026995806538250224918587747860480t)x^{41}x^{10} + (98518452119053787968460601507777030075187200t)x^{31}x^{12} \\
& - (38837356947785868546221476533457492377600t)x^{29}x^{18} + (172456616301071899740473522039025045602304000t)x^{33}x^8 \\
& + (207607043913796152417846291006608533094400t)x^{23}x^{20} + (1347796161268575274137970259609518080000t)x^{19}x^{24} \\
& + (28678729679007882446983826453299200t)x^{11}x^{32} + (3235423391448507075634523969421312000t)x^{15}x^{28} \\
& + (369946523164105972348287919690088448000t)x^{15}x^{26} - (25325507455825685199412515892480824368431104000000t)x^{23}x^2 \\
& + (3824605103268935239262184420931534848000t)x^{17}x^{24} + (4924988961027951179923638395181465600t)x^{39}x^{16} + \\
& \quad (1045165131639459300326009135431680t)x^{15}x^{36} - (2655682628267834081280t)x^{50} \\
& - (37094131678217209029859407132051956249395200000t)x^{17}x^{10} + (26041582441583848706675834880000t)x^{34} \\
& - (67037159863856426255924576869416960t)x^{23}x^{30} + (1533505063825994499016673256022636064931840000t)x^{21}x^{14} \\
& - (433700623265081507589692325888000000t)x^{24} + (176061828750205673335854482124680724480000t)x^{13}x^{22} \\
& - (36359579460419154881862929989490442240t)x^{33}x^{20} + (167196844520644444007969053495284203520t)x^{31}x^{20} \\
& - (4884976564826053694489790908674867200t)x^{29}x^{24} + (100158771488770613842177971943259504640t)x^{29}x^{22} \\
& - (1381481511846656400628506472690483200t)x^{27}x^{26} + (2808261028241984391577282269727948800t)x^{23}x^{28} \\
& - (11490892305748600580055775240519680t)x^{21}x^{32} - (1657802277174491441365727261491200t)x^{19}x^{34} \\
& + (10446406794945457074410285181173760t)x^{17}x^{34} + (89474986733894402498887680t)x^5x^{46} \\
& + (8070450532247928832t)x^{54} - (154518371608046181121911895906257469440t)x^{41}x^{12} \\
& - (163913735164468734142073913767834419200t)x^{39}x^{14} + (2236340112669032341534409651974444154880000t)x^{15}x^{20} \\
& - (6453434577780495755279261024445121167360t)x^{39}x^{12} - (125516185011582544253726957369504563200t)x^{37}x^{16} \\
& - (2835633016018098434786465985288669757440t)x^{37}x^{14} - (721400459164250311777409061837361643520t)x^{35}x^{16} \\
& - (90648190567561941616545772666093987430400000t)x^{23}x^{16} - (40473148168230072015649571849765073715200000t)x^{23}x^{14} \\
& + (2697643916478852899587519224310294118400000t)x^{21}x^{18} - (120072968923682945835937314705194751098880000t)x^{21}x^{16} \\
& + (254539783562627707933305908177532895232000t)x^{19}x^{20} - (33020976368713446467176676254949446778880000t)x^{19}x^{18} \\
& + (316211746139515109474170900815701606400000t)x^{17}x^{22} + (14017987085815297156630914274796437766297600000t)x^{35}x^2 \\
& + (26920053222620289458410373460773590322380800000t)x^{33}x^6 + (332903987133672400382154954570708586541875200000t)x^{33}x^4 \\
& + (6065813642788174993662567221471149849313280000t)x^{31}x^8 + (207252288764333257781180696855836529566679040000t)x^{31}x^6 \\
& + (46858945830518818519124743734855182466416640000t)x^{29}x^8 - (1895777069835513493261293429099980862259200000t)x^{27}x^{12}
\end{aligned}$$

$$\begin{aligned}
& +(48143444168599152345807448965120000i)t^5x^{30} + (41721795773864020111321915959541760000i)t^9x^{26} \\
& +(10345808140148646455625252945537269760000i)t^{11}x^{24} - (729996092413657151264532725760000i)t^3x^{32} \\
& +(11182556251695626674515518187094382456340480000i)t^{25}x^{10} + (5991339700937235001274385188601180004024320000i)t^{23}x^{12} \\
& +(998183470802016294837829092705809448063467520000i)t^{31}x^4 + (698950930748767936391354402064633100511477760000i)t^{29}x^6 \\
& +(109975946568156150435934080501664180076544000000i)t^{27}x^8 + (42422764606879675272516132105429663570984960000i)t^{33}x^2 \\
& +(24600967837547252137347521560352233881600000i)t^{17}x^{18} + (260254894792635498052059997043253816852480000i)t^{19}x^{16} \\
& -(860437714443919037913287257101479622821806080000i)t^{31}x^2 + (426946248202379149193189818058709607120896000000i)t^{29}x^4 \\
& +(5131672901656930322917245878408828933898240000i)t^{21}x^{12} + (654270372116130100592050581543392477026713600000i)t^{27}x^6 \\
& +(346073074004031970606458597083317806091468800000i)t^{25}x^8 - (8364786204446688830637830307840000i)t^3x^{30} \\
& -(243647464116939100877319516979200000i)t^5x^{28} + (221376065171664981818899169280000i)t^3x^{32} \\
& -(505752450130006120626975154372608000000i)t^9x^{24} - (275454196934272449002570187586330951680000i)t^{13}x^{20} \\
& -(486394800748773616375911844461648281600000i)t^{15}x^{18} - (29390248278287480879564092362293929574400000i)t^{17}x^{16} \\
& -(16416163188530005269712081402661437440000i)t^{11}x^{22} + (2027947794418494716106407802546192707380838400000i)t^{29}x^2 \\
& -(585686069891106601914871840389985540138598400000i)t^{27}x^4 + (5702266678286870296229510489199705417842688000000i)t^{27}x^2 \\
& -(752721492775622497059761273514725956229529600000i)t^{25}x^6 - (13108395379469978896845352429769214948016128000000i)t^{21}x^2 \\
& -(2419275141665462347242155020974795050188800000i)t^{19}x^{12} - (123670780125414727111054339502318377815244800000i)t^{19}x^{10} \\
& +(198979944296963014947743082774091976933376000000i)t^{19}x^8 + (204850832967586946816833360402005658435584000000i)t^{19}x^6 \\
& -(1535941325259004941518184155405050970112000000000i)t^{19}x^4 - (4657904307833532116618265435982082825256960000000i)t^{19}x^2 \\
& -(835640448136578667869642796282475131699200000i)t^{17}x^{14} - (13983908264593498648574049993696598818816000000i)t^{17}x^{12} \\
& +(56491024810040123357667413866606189608960000000i)t^{17}x^8 - (96839340165850141722167115704841384493056000000i)t^{25}x^2 \\
& +(218895893992248729200545321174516030557388800000i)t^{23}x^8 - (2880081297386629221598822012281845364817920000000i)t^{23}x^6 \\
& -(2879568535058036609374658649397214262067200000000i)t^{23}x^4 - (249900802895221229294213516387942400000i)t^7x^{24} \\
& -(3752241186240857676486746195361792000000i)t^7x^{22} - (16556183057170820603476846919968358400000i)t^7x^{20} \\
& +(141133804689597798880140451601448960000000i)t^7x^{18} - (523945907595311646077481725051535360000000i)t^7x^{16} \\
& -(511867136047529678547063416826101760000000i)t^7x^{14} + (2809286682815891034973748628711014400000000i)t^7x^{12} \\
& +(14504099798466488673677555576906711040000000i)t^7x^{10} - (1372519911926257721022258486470246400000000i)t^7x^8 \\
& -(647627273581877964844673979936197836800000000i)t^{11}x^8 + (1305099246543342639168617799371068538800000000i)t^{11}x^6 \\
& +(7223945887295274606384250753188574003200000000i)t^{11}x^4 + (10238509494074772232048449623340299059200000000i)t^{11}x^2 \\
& -(2187792914415650886608412573538713600000i)t^9x^{22} - (101960100524340141465393621982878105600000i)t^9x^{20} \\
& -(601224229505306340901147091964788736000000i)t^9x^{18} + (415350855018606975284442809497131417600000i)t^9x^{16} \\
& -(14058274317761127141424214682107904000000000i)t^9x^{14} - (9908133651739672443732038194865111040000000i)t^9x^{12} \\
& +(15178739936018386980598963664333045760000000i)t^9x^{10} + (542635607880446706885945574694898892800000000i)t^9x^8 \\
& +(93039063500047253261112225877406515200000000i)t^9x^6 + (28732523216982572811310867343867904000000000i)t^9x^4 \\
& +(228761586994723465343051337615212544000000000i)t^9x^2 - (711956167198823203068905301299335004160000000i)t^{13}x^{14} \\
& +(7135403198162400930210592053047202938880000000i)t^{13}x^{12} - (4326031382640690211147487543139351134208000000i)t^{13}x^{10} \\
& +(35330730725921579461155106169039093760000000000i)t^{13}x^6 + (25295031850921777718297933538498969600000i)t^{11}x^{20} \\
& -(2314120517402329938060471044489084928000000i)t^{11}x^{18} - (21896239873775154398038218828882640896000000i)t^{11}x^{16}
\end{aligned}$$

$$\begin{aligned}
& + (68439209253993672601736097473721532416000000_0)t^{11}x^{14} - (315823903682747460443608058855480623104000000_0)t^{11}x^{12} \\
& - (364134288080677434443795780154792345600000000_0)t^{11}x^{10} + (1701440396810113059100042919175153254400000_0)t^{13}x^{18} \\
& - (30042653858120797866480875462165790720000000_0)t^{13}x^{16} - (701520487534994227329657734010641999462400000_0)t^{15}x^{14} \\
& - (8973583982476900678313467802047576276992000000_0)t^{15}x^{12} + (4172118099691665732733997436477043113984000000_0)t^{15}x^{10} \\
& - (91120426276575433984213557163681571143680000000_0)t^{15}x^8 - (164168296998515530528235791786457935380480000000_0)t^{15}x^6 \\
& + (303158736570091209444321017345412610129920000000_0)t^{15}x^4 - (254457650991358570553180522562665400238080000000_0)t^{17}x^6 \\
& - (1490915043255344834169102696631778295152640000000_0)t^{17}x^4 + (1739744590349807720438996452368222624153600000000_0)t^{17}x^2 \\
& - (254374894029892122058702857951372115968000000_0)t^{15}x^{16} + (17943210626599366077812885537806954266624000000_0)t^{21}x^{10} \\
& - (801903721288459909202405375342534392283136000000_0)t^{21}x^8 + (1018737971135461705321394561813918741692416000000_0)t^{21}x^6 \\
& - (178301358356880646618142854385538881814528000000_0)t^{21}x^4 + (1987500529886308824783294789540249600000000_0)t^7x^4 \\
& - (16358160185809434529022339693199360000000000_0)t^7x^2 - (7462637463114018144619211626905600000_0)t^5x^{26} \\
& - (97291579365646942552120443587788800000_0)t^5x^{24} - (383283802576972143386215864860672000000_0)t^5x^{22} \\
& + (3788904367087027600553346135490560000000_0)t^5x^{20} + (27748639008390011367759613526016000000_0)t^3x^{22} \\
& + (460774301059406393788043535187968000000000_0)t^3x^{20} - (1991189437852684972395237212160000000_0)t^3x^{18} \\
& - (11380980736700269608512677478400000000_0)t^3x^{16} + (15936967589897124812480359624704000000000_0)t^3x^{14} \\
& - (436490605814772035050382189979648000000000_0)t^5x^{14} + (13432120147983318517399379107392000000000_0)t^5x^{12} \\
& - (1525080998260045061885307912192000000_0)t^3x^{28} - (199488134023862673545579430818611200000000_0)t^5x^{10} \\
& + (584947362855771035231603448692736000000000_0)t^5x^8 + (992285943296338717270710681600000_0)tx^{30} \\
& - (5659610548398494418600984576000000_0)tx^{28} - (112725631723106940815891496960000000_0)tx^{26} \\
& - (1678072977990530911445301854208000000_0)tx^{22} - (411831260057322669781069332480000000_0)tx^{20} \\
& + (299760049015924385973816451399680000000_0)t^3x^{18} + (223719410126779978075924267008000000000_0)t^3x^{16} \\
& - (1983494535137285756470825638297600000000_0)t^3x^{12} + (1053355455588136330980893800857600000000_0)t^3x^{10} \\
& + (40457286336144361893990041124864000000_0)t^3x^{20} - (347314188143401199570321336696832000000_0)t^5x^{18} \\
& + (8596591699085560349675263340052480000000_0)t^5x^{16} + (41843527250902854087252161750630400000000_0)t^5x^{14} \\
& - (8822587890162661583531873310000000000_0)tx^4 - (511098486873750355159063746662400000000_0)t^3x^8 \\
& - (1552703849487379020850094476800000000000_0)t^3x^6 - (226137564795036866159325337200000000000_0)t^3x^4 \\
& - (854810737802426766759977058480000000000_0)t^3x^2 + (90679939773158060171818055884800000000_0)tx^{12} \\
& + (33062142414493162844247838464000000000_0)tx^{10} - (97668100600991830080620729280000000000_0)tx^8 \\
& - (36615306413764876587159169800000000000_0)tx^6 + (2637236207352580842285268992000000000_0)tx^{18} \\
& + (53370269378459884642982141952000000000_0)tx^{16} + (73442281095760897010396830924800000000_0)tx^{14} \\
& - (181806374909470004849456248226830929100800_0)t^{37}x^{12} - (2028959971991118771872995835495055360_0)t^{19}x^{30} \\
& - (10809567679868698276062937912796459827200_0)t^{31}x^{18} - (3488376568497946391963642119398893813760_0)t^{29}x^{20} \\
& - (328547377021483148592836078476897246248960_0)t^{39}x^{10} - (462034888915132744520606022927803586969600_0)t^{41}x^8 \\
& - (48287606048206023146801335214303870976000_0)t^{43}x^6 - (351477147327156998746516566935146573332480_0)t^{45}x^4 \\
& - (68520016530628411392000_0)tx^{48} + (1429982953682679889920000_0)t^3x^{46} \\
& - (59937956129550952913751244800_0)t^7x^{42} - (24784447634676607878017589109063680_0)t^{15}x^{34} \\
& - (254389186526983753337841879141580800_0)t^{17}x^{32} - (1816393847362752500740726456320000_0)t^{13}x^{36}
\end{aligned}$$

$$\begin{aligned}
& - (66344033481088061844422169225854976000i)t^{23}x^{26} - (284536748147692687647773239798954721280i)t^{25}x^{24} \\
& - (1050554076741119896573662693004463308800i)t^{27}x^{22} - (31325268239391785624740893462833922048000i)t^{33}x^{16} \\
& - (81712634001276533800886070526843583201280i)t^{35}x^{14} - (3257608428650534619690943119360i)t^9x^{40} \\
& - (95165798452022085495032276582400i)t^{11}x^{38} - (12873529499741474735350159684455628800i)t^{21}x^{28} \\
& - (203902795632345809960230026647017881600i)t^{19}x^{26} - (22908586598141937341330450798346240000i)t^{17}x^{28} \\
& + (39549234016486086437574138497083637760i)t^{27}x^{24} + 18227827631713607065601300402012160t^{16}x^{34} \\
& - 2381815357227713691648000t^2x^{46} + 1153819782082246723034194654066114560t^{20}x^{30} \\
& + 9375432258198579806307758943361293971619840000t^{24}x^{10} - 47196311849010003024147382272000t^{14}x^{38} \\
& - 304935727742493078213211857553981440t^{16}x^{32} - 13498327278061804369230915719492070128742400000t^{22}x^6 \\
& + 72396207255716498625891992359667257835520t^{48} - 1275697209458570020755252645215525142528000t^{46} \\
& + 685200165306284113920x^{50} + 134278725396186566048755584756980121600t^{20}x^{26} \\
& + 1870707224969939193465406246141055723875860480000t^{32} + 6630421791182222367129600x^{44} \\
& + 5857076589066759403694351538337339146240t^{50} + (79966444622242277629058692939776000i)t^9x^{32} \\
& + (1938945690791722780805289738240000i)t^9x^{34} - (7498364225045309774843030325519961817088000i)t^{43}x^4 \\
& - (256302508324771652206376400354213573427200000000i)t^{15}x^2 + (647131022773793427762608626439553024000i)t^{25}x^{22} \\
& + (591288676238050850647240140128256000i)t^9x^{30} + (81903829951223642629345797734400i)t^{13}x^{38} \\
& - (103213712386742280927534120960i)t^{11}x^{42} - (180597313830431252230963200i)t^7x^{46} \\
& - (19886280993675340471142763724800i)t^{15}x^{38} + (55172194626689641860282140031398707200i)t^{33}x^{18} \\
& + (53754076922266392104970576273080320i)t^{21}x^{30} + (7421195005965277868351484592128000000000i)t^3x^{14} \\
& - (251972104135582051803797279942671073280000i)t^{15}x^{22} + (31202525045748548344637030400000i)t^3x^{36} \\
& + (11835627254564533457372066299647098880i)t^{25}x^{26} + (1780302377391828279037526016000i)t^3x^{38} \\
& + (76589220236658430138183673198936064000i)t^{17}x^{26} + (2622076023927624179908608000i)tx^{40} \\
& - (196649847196573694078169907200000i)t^3x^{34} + (152449835804743935318897961863848552457830400i)t^{33}x^{10} \\
& - (5073227244500415627342643200i)t^9x^{44} - (4220038583312441986252800i)t^5x^{48} \\
& + (235698530461658048008249458189926400i)t^{13}x^{30} + (17300469139641508062830366395534934016000i)t^{15}x^{24} \\
& + (13225284378221171505201635761555104595968000i)t^{23}x^{18} + (1918343650037937540072793750920244469170176000i)t^{37}x^4 \\
& - (52441787558547041550336i)t^3x^{50} + (38094686841102843735789162208979331317760000i)t^{29}x^{14} \\
& + (1618488934720649497869780915439515205632000i)t^{21}x^{20} - (270656408182873542366801183649787552779468800i)t^{41}x^2 \\
& + (2134054958430611601031628397915264786628608000i)t^{23}x^{10} + (38841854556652808689837670400i)t^3x^{40} \\
& + (1903503551644683834803109652500000000i)tx^2 - (643763149165105277600255675460997764612096000i)t^{25}x^{14} \\
& + (45592535522878864809677074324849677872136192000i)t^{35}x^4 + (88472753411093062105121685504000i)t^5x^{36} \\
& - (4059110212347693078205954489397689712640i)t^{27}x^{20} + (33241987315493597583477591080334454790553600000i)t^{37}x^2 \\
& - (81224433326491748690432928609762017280i)t^{43}x^{10} - (583477117624035568307404800i)tx^{42} \\
& - (676976023403693513833666862973745889280000i)t^{33}x^{14} + (35314849866355877332236814214234112000i)t^{13}x^{28} \\
& - (8474006761367434641851073042503636405452800i)t^{41}x^6 - (1788143827474423703365491496680354251538432000i)t^{29}x^{10} \\
& + (95473738663812686487426281636452972363776000i)t^{35}x^6 - (330659319922667922889621224869068800i)t^{25}x^{28} \\
& + (144949402432486511651202571023443885555712000i)t^{27}x^{14} - (11941632263878963926849896005247592038400i)t^{43}x^8
\end{aligned}$$

$$\begin{aligned}
& -(31539607557895913413961772979127215718400000000t^{13}x^2 + (43197079536121588067443686692068786176000000000t^{13}x^4 \\
& \quad + (208839561057997462774103408640t^9x^{42} + (4871296251226255679061460254720t^{11}x^{40} \\
& \quad + (9693541752922338715176516045314602504814592000t^{27}x^{10} + (2599299729431418678293031375234662400t^{37}x^{18} \\
& \quad + (890258698893593884254680383488000t^5x^{34} + (617749619487316226692912209023798870016000000t^{19}x^{14} \\
& \quad - (199788628469010053794679173939200t^{17}x^{36} - (163426623278020558848t)x^{52} \\
& -(326544688952092671088020910198923897738362880000t^{25}x^4 - (1860420144149823682517466955370372215603200t^{35}x^{12} \\
& - (6742550036321861991016767737529459592396800t^{39}x^8 - (75054779687332214335711280959900876800t^{35}x^{18} \\
& - (280253779194546335546081280t^5x^{44} - (190963691662308199282520275384979265945600t^{31}x^{16} \\
& + (83390510037567363979250583302307840t^{19}x^{32} - (1216082416509565092856733785651200000t^7x^{26} \\
& + (333662689192625307648000t^3x^{48} + (18753366223992343311489063347968750387200t^{21}x^{22} \\
& + (1567822553126940872518179176133154402467840000t^{25}x^{12} - (1608327438048288559868065873920t^{13}x^{40} \\
& + (19701140267271161559303113932800000t^7x^{32} - (1458697511269550513037429436317696000t^7x^{30} \\
& + (9097580498470586847791768036966400000t^7x^{28} + (19524490658158721915149165642383360000t^{11}x^{28} \\
& - 122668013282885302724032975777824768t^{52}x^4 - 36346078009743793399713474304540672t^{54}x^2 \\
& - 136805248917443088331212177643929600t^{38}x^{18} + 334687692548113660722460576400717523399475200000t^{24}x^8 \\
& + 206995730486941084033022636851200000t^4x^{28} - 459615026959051228757712506967201241104384000000t^{20}x^8 \\
& - 2220309863310580620241715868960282378240000t^{16}x^{20} - 1477259148792001435949353402368000t^{12}x^{36} \\
& + 511941373971113883094588215528246246113280000t^{26}x^{10} - 768202185711599224185311678221516800000t^{10}x^{26} \\
& - 5637172471017919742422403805792939540480t^{28}x^{20} - 2761244737023741211242685715164692480t^{18}x^{30} \\
& - 6594238939124154795318950182538630104350720000t^{40} - 28445364376702179452996712813939932201484288000t^{38} \\
& - 44481029885260765352029454260428611612835840000t^{36} + 284893837965477790553160906888947757188382720000t^{34} \\
& - 55775094703143445848302785569669046389964800t^{44} - 829904413177855197620045128089838818636595200t^{42} \\
& - 185954093329512031809032574666185260400640t^{36}x^{12} + 15281173070580163638882350080t^8x^{42} \\
& + 25535409887190712320x^{52} + 453963729085122635366400x^{46} + 425262323275195630611208297512960t^{20}x^{34} \\
& + 162767752165847104215222926054522880t^{18}x^{32} - 19984992904942842947046563433868060262400t^{26}x^{20} \\
& - 64982493235785466957325784380866560t^{36}x^{20} - 16328132153102484757436075747256670617600t^{30}x^{18} \\
& - 640762148980405695605430402420562513100800t^{44}x^2 - (1446291266406144105468147753483553996800t^{21}x^{24} \\
& - (105042724422268120610964683253350400t^{13}x^{32} + (1371202360385190386900926464000t^7x^{38} \\
& - (1914789136942693178652863569172889600t^{15}x^{30} - (1188922776475168065175997644800t^9x^{36} \\
& - (2907253794930499725817048517836800t^{11}x^{34} - (41764663075831282453708800t)x^{44} \\
& + (285083189124871166204313600t^3x^{42} + (29602995888232897523063193600t^5x^{40} \\
& -(28956417649679646595237466913882255654912000t^{37}x^8 - (57339330423453656354839707547229719049011200t^{39}x^6 \\
& - (10050191080370986977157368565765031067648000t^{35}x^{10} - (72519307776073277497604268501612643536076800t^{41}x^4 \\
& - (910613862232116887507633115241665842380800t^{31}x^{14} - (2821083844686038120966000221447742973542400t^{33}x^{12} \\
& - (52792568908132579352871506293974704219750400t^{43}x^2 - (38112852883199004759541425804975852748800t^{25}x^{20} \\
& - (134362973850395618898654534222911373312000t^{27}x^{18} - (367046618157418306597095598512807503462400t^{29}x^{16} \\
& - (8327023472118428360981339197921453670400t^{23}x^{22} - (158658185456578898391336355391083433164800t^{47}x^2 \\
& + (21674543492822311952670930746159923200t^{45}x^8 - (9868301456540033351941679216119743774720t^{45}x^6
\end{aligned}$$

$$\begin{aligned}
&+(83184246507456595909734861699337420800i)t^{49}x^4 - (1836627662000924744207033099681016053760i)t^{49}x^2 \\
&+(87656517825061789238215230607903948800i)t^{47}x^6 - (5502369570189197507829252279276656394240i)t^{47}x^4 \\
&\quad + (43454202207496400544015930988953600i)t^{29}x^{26} + (36258920151283494656409600i)t^9x^{46} \\
&\quad + (667164130783616301677936640i)t^{11}x^{44} + (1510788339636812277350400i)t^7x^{48} \\
&\quad + (45323650189104368320512i)t^5x^{50} + (40194219019025417525908138396533915648i)t^{51}x^2 \\
&\quad + (9785073918159705757943070720i)t^{13}x^{42} + (117420887017916469095316848640i)t^{15}x^{40} \\
&\quad + (1174208870179164690953168486400i)t^{17}x^{38} + (9915541570401835168048978329600i)t^{19}x^{36} \\
&\quad + (71391899306893213209952643973120i)t^{21}x^{34} + (441331741169885318025161799106560i)t^{23}x^{32} \\
&\quad + (2353769286239388362800862928568320i)t^{25}x^{30} + (150641234319320855219255227428372480i)t^{31}x^{24} \\
&\quad + (451923702957962565657765682285117440i)t^{33}x^{22} + (871608657482776313856i)t^3x^{52} \\
&+(7879982337644721887877821432290344960i)t^{41}x^{14} + (10506643116859629183837095243053793280i)t^{43}x^{12} \\
&+(11461792491119595473276831174240501760i)t^{45}x^{10} + (9966776079234430846327679281948262400i)t^{47}x^8 \\
&+(6644517386156287230885119521298841600i)t^{49}x^6 + (3189368345355017870824857370223443968i)t^{51}x^4 \\
&+(981344106263082421792263806222598144i)t^{53}x^2 + (1169684878244138405231864118855598080i)t^{35}x^{20} \\
&+(10863550551874100136003982747238400i)t^{27}x^{28} + (17392363067036385362532158668800i)t^9x^{38} \\
&\quad + (762129609727652063022112623820800i)t^{11}x^{36} - (1836634356136191983616000i)t^4x^{46} \\
&\quad + (1769603905182316363776000i)t^3x^{44} - (760221837666323109878169600i)t^5x^{42} \\
&+(439693263919834105224160512961413120000i)t^{23}x^{24} + (2886551928615964292372018007858216960i)t^{17}x^{30} \\
&+(22020758694646164215156284415646105600i)t^{19}x^{28} + (120617896357581977337841525114640793600i)t^{21}x^{26} \\
&\quad + (17958478162868022020436941340672000i)t^{13}x^{34} + (272700831829145733337849309377331200i)t^{15}x^{32} \\
&\quad + (109165024522635706872323112960i)t^7x^{40} - (4156362777522255027448343007350963463782400i)t^{45}x^2 \\
&-(4020495713590008615534200207365111220797440i)t^{37}x^{10} - 9415077144957553451203451714273280t^{32}x^{24} \\
&\quad - 31215190761043144998912000x^{42} + 344103852298198022379703582105408634880t^{28}x^{22} \\
&\quad - 15107883396368122773504t^6x^{50} - 2034248169202331775978700800t^4x^{42} \\
&\quad - 130467652242129410105907609600t^{18}x^{38} - 2336873864393571558114154037933243577139200t^{32}x^{14} \\
&\quad - 3238569277612787863279216281600000000x^{14} + 67804260738166003526011761928704000000000t^4x^8 \\
&\quad - 36777645097490443168763483258880t^{24}x^{32} - 14524386677156808659580508127612552557363200t^{42}x^4 \\
&\quad + 590123868937463986484098974609375 - 99418438941108609872801988080641769472000t^{34}x^{14} \\
&\quad - 20889731069498433987502863977281802240000t^{14}x^{22} - 111194021797269383612989440t^{12}x^{44} \\
&\quad - 39835931381295029061761213170031001600t^{30}x^{22} + 2790150190569226890399460412620800t^{22}x^{32} \\
&+191757320697125931664483199351129112576000t^{44}x^4 - 14806630715386645743566026168074240000t^{28}x^{24} \\
&\quad - 181059175864568335600066379120640t^{26}x^{30} - 56699105762960814975959118643200t^{10}x^{38} \\
&\quad + 4941871179954341236865299906560t^{10}x^{40} + 58634040699013285612118605824000000t^2x^{28} \\
&\quad - 2896946813833093369601062065930240t^{30}x^{26} - 19851298660586427838758360712945230623539200t^{40}x^6 \\
&\quad + 182356014457782739582412071764096000000000t^6x^2 - 7035516132118785058406400000t^8x^{44} \\
&\quad - 180149597516704266131079168000t^{10}x^{42} - 526581983656404362992159398297600t^{16}x^{36} \\
&\quad - 317044953519604399080582433210368000000t^4x^{22} + 1890813755937896263142577136625673830400t^{32}x^{18} \\
&\quad - 211375333124470754637325183714590720t^{22}x^{30} + 9237689880790112088883200t^4x^{46}
\end{aligned}$$

$$\begin{aligned}
& +4414023515406791807953260446898919032068505600000t^{26}x^4 - 26583747232821327391633275428536320t^{34}x^{22} \\
& - 473206035314517163368784159070748672000t^{24}x^{24} - 181054908375609709795737600t^6x^{46} \\
& - 22364988803953126855502039502471976871526400000t^{30}x^2 - 9437887494305687273472t^2x^{50} \\
& + 1691591106317611569945628442102905780630978560000t^{30}x4) \\
D(x, t) = & (8070450532247928832t^2x^{54} + 36350809655401015681180427936700825600000t^{32}x^{16} \\
& + 1575993461412103720860622761492480000000t^{12}x^{24} + 377697084909203069337600t^8x^{48} \\
+ 268904127980576130822505383887171380838400000t^{22}x^{14} & + 3638268182857093996065903046610892525404160000t^{24}x^{12} \\
& + 754100310582866509444348379136000t^{12}x^{34} + 265780695446251489235404780851953664t^{50}x^6 \\
+ 1399445571808728987992064000x^{40} & + 435804328741388156928t^4x^{52} + 304035600835179448516873912320000000x^{20} \\
& - 452286998491913574193652786936250378485760000000t^{20}x^2 + 2053985160694901372229601953054720t^{20}x^{32} \\
+ 905949868295834587073585405322962613043200t^{40}x^8 & + 3282199256988080522863159050085296217522176000000t^{24}x^{22} \\
& + 5997247763158700907480411787896613031116800000t^{22}x^{12} + 1728540215636298781504726910109745152000t^{24}x^{22} \\
& + 1783378234235682816461571631764605522411520000000t^{20} + 170146808831429798943552018422169600t^{22}x^{28} \\
& + 476832786982566115213273092904448321126400t^{46}x^2 + 12904994981455727719810653597833625600t^{22}x^{26} \\
& + 1447750563892595644186583567190038937600000000t^{14} + 243786400414904154454944959692800000t^8x^{28} \\
& + 47805942649202588286991534248050452070400000000t^{16} + 109203969178717342626423767040000000x^{22} \\
- 2286910810903804572611737086666258052546560000000t^{22}x^2 & + 27150575210078763935232119042148925440t^{32}x^{20} \\
& + 307184922986514868031281827484312535040t^{30}x^{20} - 289013088039781532465117528064000000t^4x^{26} \\
& + 4417601575937550553877618547827668942848000000t^{20}x^{12} + 154664294264485295022931968000000t^2x^{34} \\
& + 842801839328651744850739200000t^2x^{36} - 146019008806745961261957120000t^2x^{38} \\
& + 27753679622140423349207040000t^2x^{40} + 646928477649228999426048000t^2x^{42} \\
& - 207623478685888407907860480000t^4x^{38} + 20937123904286613005402112000t^4x^{40} \\
& + 6742954895605010319020465848320000t^6x^{32} - 536156004179381408448758415360000t^6x^{34} \\
& - 10514177916809143662768291840000t^6x^{36} + 754883827486340652566839296000t^6x^{38} \\
& + 238331653352446085438947417128960000t^8x^{30} - 15711660520023848098856246968320000t^8x^{32} \\
& - 126891025180578488604017295360000t^8x^{34} + 32813189207724555489521958912000t^8x^{36} \\
& + 7485513917833974771008682747494400000t^{10}x^{28} - 290335169636731959259559022821376000t^{10}x^{30} \\
& + 8580903767602244291897944178688000t^{10}x^{32} + 1314987968951422746418948866048000t^{10}x^{34} \\
& + 214864911830795178680181505256325120000t^{12}x^{26} - 3374889078929840221096625622220800000t^{12}x^{28} \\
& + 508005421857992928774650943504384000t^{12}x^{30} + 30267120631629444191157227618304000t^{12}x^{32} \\
& + 3171769767974343051529883216982835200000t^{14}x^{24} - 142482870611399946375953800086159360000t^{14}x^{26} \\
& + 13606852387906819013259034707886080000t^{14}x^{28} + 598984857479078815007746597847040000t^{14}x^{30} \\
& + 38039134143698928709583970108860006400000t^{16}x^{22} - 2752286761716619684957531330502983680000t^{16}x^{24} \\
& + 61226323590289961201017698102804480000t^{16}x^{26} + 9390455376733365857199947803262976000t^{16}x^{28} \\
+ 3204490160964043853564193213694083072000000t^{18}x^{18} & + 427498138155224817932559756143854878720000t^{18}x^{20} \\
& - 14980111545181707868503094739966361600000t^{18}x^{22} - 1681429565109162803049871039518474240000t^{18}x^{24} \\
& + 91798533195212779096280810611802112000t^{18}x^{26} + 2475793708819518226446543124808922562560000t^{20}x^{18} \\
& + 92961278267615583697333686592082018304000t^{20}x^{20} - 25674361535645849244926199275225874432000t^{20}x^{22} \\
& + 449020844191954680185824597946400768000t^{20}x^{24} + 19743988046107860315113110992249327452160000t^{22}x^{16}
\end{aligned}$$

$$\begin{aligned}
& +173299978878659127744777359911053950976000t^{22}x^{18} - 150387426519720976103804992299535958016000t^{22}x^{20} \\
& + 31805025294296753351181936957063168000t^{22}x^{22} + 18278120752819639822993661803332089413632000t^{24}x^{14} \\
& + 13924266616543646254004282886458148126720000t^{24}x^{16} - 263086716508546453462222878704444375040000t^{24}x^{18} \\
& - 10501689082989725965648431729667473408000t^{24}x^{20} + 1576378662803225068320647971881092162519040000t^{26}x^{12} \\
& + 95068475786349880479852949356217305661440000t^{26}x^{14} + 2371794859292761543054058419606184263680000t^{26}x^{16} \\
& - 22090065536952836905305677596396093440000t^{26}x^{18} + 6951381788798002623231703811634243494215680000t^{28}x^{10} \\
& + 512838646916023051046874584896753536860160000t^{28}x^{12} + 23305074387248735486684874287130649559040000t^{28}x^{14} \\
& + 376839770025420391006475124167587921920000t^{28}x^{16} + 1262334319315300685618771981924876477922560000t^{30}x^8 \\
& + 1796174313229846577131832287252202687299584000t^{30}x^{10} + 112173764341230543757650278218556095070208000t^{30}x^{12} \\
& + 3578259310775587240522517936505542934528000t^{30}x^{14} + 10813699470487503245212713597145330923601920000t^{32}x^6 \\
& + 3779440644980508207723066619211914212802560000t^{32}x^8 + 349900116849188357511677450533328255975424000t^{32}x^{10} \\
& + 1660621268478804190318906547023619555328000t^{32}x^{12} + 272744367027219662559395744947444555878236160000t^{34}x^2 \\
& + 20793272897980459440302513223551232057016320000t^{34}x^4 + 5230658945723329194787275596002101339095040000t^{34}x^6 \\
& + 749523362641332689152975594092382692311040000t^{34}x^8 + 49983310497990326159773117388997418549248000t^{34}x^{10} \\
& + 52576173372782631579437804058691410056970240000t^{36}x^2 + 703085136067313542485124258855938938634240000t^{36}x^4 \\
& + 1159784085595448284383007755007786934599680000t^{36}x^6 + 105662604255989151674474337298435924819968000t^{36}x^8 \\
& + 8393563154308246435316092133885712122511360000t^{38}x^2 + 1365312148206882546230979119383051197480960000t^{38}x^4 \\
& + 160534982496242752718895420140706601107456000t^{38}x^6 + 1116424402641675257782000514567788296142848000t^{40}x^2 \\
& + 171200513281868103314463034209210684407808000t^{40}x^4 + 115941334198672965906772183131130272153600000t^{42}x^2 \\
& + 11609908628171267329879900160000t^{44}x^{34} - 12529898497296453883605811200000t^{44}x^{36} \\
& + 30358137082849217016760068466708316160t^{42}x^{12} + 9305387796557619296682643698588057600t^{38}x^{16} \\
& + 1220296243168163624689012085536849920t^{34}x^{20} + 3761486627686812606568280980507852800t^{36}x^{18} \\
& + 52869279352453953995219382703226880t^{30}x^{24} + 306352125562849623835312313472122880t^{32}x^{22} \\
& - 939244474797448240925344341688320t^{24}x^{30} - 2036915728476393775500746765107200t^{26}x^{28} \\
& + 2715887637968525034000995686809600t^{28}x^{26} + 88067136833831443917116378858913792000t^{34}x^{18} \\
& + 3770819685642526105157041014258322636800t^{34}x^{16} + 242232227259744906327205614300482764800t^{36}x^{16} \\
& + 9985677311863354087177312465305206784000t^{36}x^{14} + 21644308079593744913041828150818688204800t^{38}x^{12} \\
& + 555612670817205779151974729796865228800t^{38}x^{14} + 1045274756806913810549146767901599989760t^{40}x^{12} \\
& + 3771955126617755429943869071298666926080t^{40}x^{10} + 1065546593115172342968750894771653836800t^{48}x^4 \\
& + 17726671942352367214951880737120950681600t^{48}x^2 + 1678946556020459640428136492887231692800t^{46}x^6 \\
& + 38591746305986311331935708854675623116800t^{46}x^4 + 1876250089152696165609127178768744448000t^{44}x^8 \\
& + 52981813846561953362086340737084529049600t^{44}x^6 + 1581838920988732385212751291604459847680t^{42}x^{10} \\
& + 51495843115032504674506000401219924787200t^{42}x^8 + 427486526164610009496124542494240145408t^{50}x^2 \\
& - 18085879642767608512512t^4x^{50} - 864345252003753177907200t^6x^{48} \\
& - 25625294529993623627366400t^8x^{46} - 163426623278020558848t^2x^{52} \\
& - 7961035780082242658962400870400t^{18}x^{36} - 1010497056548415767695274803200t^{16}x^{38} \\
& - 103307799635955355021360496640t^{14}x^{40} - 8420808804570131397460623360t^{12}x^{42} \\
& - 535655816542615011443343360t^{10}x^{44} + 39510121231407451703555230538127114240t^{44}x^{10} \\
& + 40298359051135367027699895558261964800t^{46}x^8 + 31082285657356093632938563914537369600t^{48}x^6
\end{aligned}$$



$$\begin{aligned}
& +17066187347981417741481087755089870848t^{50}x^4 + 5949398644219937182115599325224501248t^{52}x^2 \\
& +18677073521436768705402720990957404160t^{40}x^{14} - 5279517849634190419943000899584000000t^6x^{24} \\
& -258686580444542458664645075927040000000t^6x^{22} + 1281294603748571079376109819658240000000t^6x^{20} \\
& +538606517257420793983603939737600000000t^6x^{18} + 40632605296715577882674337310310400000000t^6x^{16} \\
& +83952811623104315603832208254566400000000t^6x^{14} - 134986125889800830113862371717939200000000t^6x^{12} \\
& +226269541560428560596752408759500800000000t^6x^{10} + 67647114339920995158604776510259200000000t^6x^8 \\
& +248214435244222416793159132532736000000000t^6x^6 + 88532308730520375054811778036736000000000t^6x^4 \\
& +425653409346182136431244650720998195200000000t^{10}x^6 + 76294712381288010032264459433775616000000000t^{10}x^4 \\
& -27324238507386656848055530696271462400000000t^{10}x^2 + 22457568783201271085079640984780800000t^8x^{26} \\
& +283001329321404054740398082359296000000t^8x^{24} + 1035965745375336739544553373040640000000t^8x^{22} \\
& -4484494117306353101987300448927744000000t^8x^{20} + 5755032343936187325995623246725120000000t^8x^{18} \\
& +18303162933596724799603811234611200000000t^8x^{16} + 178158407225683335199666005344256000000000t^8x^{14} \\
& +9508784297706286648419893210460979200000000t^8x^{12} + 10372326156420452630427666076611379200000000t^8x^{10} \\
& +3891809924233785033987521258186342400000000t^8x^8 + 5088782684638084781459521209493094400000000t^8x^6 \\
& +2240724686752186520615947115458560000000000t^8x^4 - 447163124318525284680337496193024000000000t^8x^2 \\
& +538782474916061007312702563942400000t^6x^{28} + 3988285472940781146629499518976000000t^6x^{26} \\
& +59510455351868305889781645246015209472000000t^{18}x^{16} + 379218738427503068004432222021388075008000000t^{18}x^{14} \\
& -2271495231230372239126163345838132166656000000t^{18}x^{12} + 6751365136342767095394504716636984967168000000t^{18}x^{10} \\
& +44818892019736157405881684510319396782080000000t^{18}x^8 + 52998329023627165545406326124335058649088000000t^{18}x^6 \\
& +66907938603713440839529270714429467525120000000t^{18}x^4 + 44396926936640059078217283654574575452160000000t^{18}x^2 \\
& +5654482053774315508113535629080395776000000t^{16}x^{18} + 2324493988172764775632370914528591872000000t^{16}x^{16} \\
& -300971348774478263797125643887074869248000000t^{16}x^{14} + 102950418071741558114458096145201627136000000t^{16}x^{12} \\
& +7040200226082982272833115629630905122816000000t^{16}x^{10} + 263184828240212310707245664633294444544000000t^{16}x^8 \\
& +177467386941634649692064513010785530675200000000t^{16}x^6 + 184009153910906276220105121119831746150400000000t^{16}x^4 \\
& +49379250751731184312116545944507216035840000000t^{16}x^2 + 434410403606700917159749048671928320000000t^{14}x^{20} \\
& +2446559443766746036645571271881392128000000t^{14}x^{18} - 4890280590539973326662944209573511168000000t^{14}x^{16} \\
& -69459342845011635131241509734487949312000000t^{14}x^{14} + 516914016496841802824136642470508232704000000t^{14}x^{12} \\
& +355711990239705492738001588266511368192000000t^{14}x^{10} + 1282258446325488374587429654664136622080000000t^{14}x^8 \\
& -1923420884515934866197876121752148377600000000t^{14}x^6 + 288830668625933804840078884268534661120000000t^{14}x^4 \\
& +78282045180849148283578335439988824473600000000t^{14}x^2 + 26095380438153244622868487329546240000000t^{12}x^{22} \\
& +251409733081928052148452316963405824000000t^{12}x^{20} + 1523452009322018195561908845523501056000000t^{12}x^{18} \\
& -4341430283049306788733870147750592512000000t^{12}x^{16} + 50068460030576133500763579557986959360000000t^{12}x^{14} \\
& +262987259814607486551764452758886809600000000t^{12}x^{12} + 717632862095298223600311179654473973760000000t^{12}x^{10} \\
& -1016770555140057428909170318101813657600000000t^{12}x^8 + 11080296956179642110253666587692236800000000t^{12}x^6 \\
& +2451282792972500172287142803672137728000000000t^{12}x^4 + 1062793811028542273954235560379285504000000000t^{12}x^2 \\
& +1370703874232027858186797056000000t^2x^{30} + 668122506779753170594170006405120000000t^{10}x^{24} \\
& +9724283176340965691303041815281664000000t^{10}x^{22} + 88366808603464530850038340550393856000000t^{10}x^{20} \\
& +200616975937754907539641889011531776000000t^{10}x^{18} + 3826764368959055772847528463887761408000000t^{10}x^{16} \\
& +16445067236190292455349183933285662720000000t^{10}x^{14} + 61848254590225542893843380675144581120000000t^{10}x^{12}
\end{aligned}$$

$$\begin{aligned}
& +126712929765722174352989644438382837760000000t^{10}x^{10} - 111100553615164217617222336685644185600000000t^{10}x^8 \\
& + 3758664155946010619833441917000000000t^2x^4 - 4864509076425303133385724667500000000t^2x^2 \\
& + 6120773011462333780643383296000000000t^2x^{14} + 146892366925386088445247384576000000000t^2x^{12} \\
& + 134163871190814225920369962752000000000t^2x^{10} - 141539964772063793980233309120000000000t^2x^8 \\
& + 61932686985434087097791475960000000000t^2x^6 + 223249366208657755774113546240000000t^2x^{24} \\
& + 1525207593412463622658499543040000000t^2x^{22} + 5994976061617229555098866155520000000t^2x^{20} \\
& + 5490316793105606233697019494400000000t^2x^{18} - 44629564422705720657986897510400000000t^2x^{16} \\
& - 10092002068217968292713492293120000000000t^4x^6 + 1426976376804025982515115655120000000000t^4x^4 \\
& + 6086215927370841376226763891240000000000t^4x^2 + 1899556833488468028671655936000000t^2x^{32} \\
& + 695502358737559683160080384000000x^{28} + 205118709781238358265036800000000x^{30} \\
& - 61608881241767344919688511488000000t^2x^{26} + 246249448051397558996181919759073280t^{40}x^{16} \\
& + 919871071955781894387402163200000000x^{16} - 4388160454871058126759872928153600000000t^4x^{14} \\
& - 2636205835529455458325836595200t^{12}x^{38} - 6932304092031817962586495563772095114444800000t^{28}x^6 \\
& + 14677610877239558636914606080t^{16}x^{40} + 4951956657825451832983684032197860949753856000000t^{28}x^2 \\
& + 71324338563021913384438512746496000t^{24}x^{28} + 3021893300501909201413693119462098432163840000000t^{22}x^4 \\
& + 27015929132485908177046619168169435070464000000t^{28}x^4 - 5504577854417967059540083998720000000t^4x^{24} \\
& + 9756424235561275834476842188800000t^4x^{30} + 290873883383395293950115840000x^{36} \\
& + 377148744120545052012899942400000000x^{18} + 5281482997369216878623473876702110846812160000000t^{24} \\
& + 242613943298953153892340203520t^{12}x^{40} + 35670306180251594438737920000000x^{34} \\
& + 44175712881455515631714199386563522068480000t^{20}x^{16} + 6338177564865693519376856469575498773561344000000t^{26}x^2 \\
& + 415282336634767951930319970081177600t^{48}x^8 + 498338803961721542316383964097413120t^{46}x^{10} \\
& - 32710347494230053298239229132800t^{14}x^{36} + 7251784030256698931281920t^{10}x^{46} \\
& + 1576450678254868537097514957619200000000t^4x^{10} + 20445519806420736257556480000x^{38} \\
& + 44127486471955398053068800t^4x^{44} + 1333318312076791070244210908645491463946240000000t^{20}x^4 \\
& + 286962690520227602230354150604262604800000000t^{12} + 26437549328398386594487634062500000x^4 \\
& + 5933699299941143590532514874032000000000000t^8 + 4406258221399731099081272343750000x^2 \\
& + 103977479969556750712122761572466688000000000t^{10} + 2377818825429806365415032224000000000x^{12} \\
& + 2248824994945868163650400526000902994132992000000t^{24}x^4 + 113763827640185120774184669020160000000t^4x^{20} \\
& + 6490172664263019382722967633920t^{22}x^{34} + 352500657711978487926501787500000000x^6 \\
& + 19530765584259996361756610429280000000000t^6 + 24749526069840384271118499840000000x^{24} \\
& + 8447652950228953247772105120000000000x^{10} + 652126216767160202664028306875000000t^2 \\
& + 6632767477764166650372135675000000000x^8 + 441310680560670668113241580705000000000t^4 \\
& + 427429451981599512116402243343776766492672000000t^{24}x^6 + 18739138048509740364670893590880588084019200000t^{28}x^8 \\
& + 448431481455645367520627628441600000000t^4x^{18} + 287594800569781387551854021836800000000t^4x^{16} \\
& + 901453503421959753426231788062652340633600000000t^{22}x^8 + 1666403248260227460718679883251712000t^{24}x^{26} \\
& + 28572665539648985414781252545184371048448000000t^{22}x^{10} + 1651911088656450867053985792000t^8x^{38} \\
& + 834371587798168559782283182080000t^4x^{32} + 5523577538641101257285032973107200000000t^4x^{12} \\
& + 33009145572236048990208000t^2x^{44} + 6334649535323138275582868390212169367552000000t^{20}x^{10} \\
& + 1468063399739249655388569600t^6x^{42} + 314012943886462425761852304956325888000t^{22}x^{24}
\end{aligned}$$

$$\begin{aligned}
& +274459013598866648991695005997698123825152000000t^{22} + 5192296858534827628530496329220096t^{56} \\
& \quad + 72057594037927936x^{56} + 800321866265768913525889459814400t^{14}x^{34} \\
& \quad + 1611450482288450576601048313076121600t^{20}x^{28} + 4354936915199144629320548352000000x^{26} \\
& \quad + 166831344596312653824000t^4x^{48} + 4913062449081246072633342528847872000t^{18}x^{28} \\
& \quad + 39341591262497599098939931640625 + 44972558479823876362363068482713760563200000t^{20}x^{14} \\
& \quad + 26812180381550247936000t^2x^{48} + 183911003444980949797158146388108981043200t^{30}x^{16} \\
& + 5161584377434858309158634524950988979175424000000t^{26} + 81520561577307463991540164465350672384t^{52} \\
& \quad + 990430625765518370142192174798733312t^{54} + 504403158265495552x^{54} \\
& \quad + 47366279888452989182646681600t^6x^{40} + 35205134315736619083144521318400t^{10}x^{36} \\
& \quad + 2358727038364204878531557951596707761356800t^{34}x^{12} + 18852314330777518080000x^{48} \\
& + 1363747262032097941878923665921834016047104000000t^{30} + 3117591371525724658936123133473965962428416000000t^{28} \\
& \quad + 286648586087531690032932637900800t^{18}x^{34} + 375237254173558185137039115823349760t^{42}x^{14} \\
& \quad + 40386845309055128813079558647992811520000t^{28}x^{18} + 487722556256848871514574433927823360000t^{26}x^{22} \\
& \quad + 477574687129983144719867965593354240t^{44}x^{12} + 11172931240400344168878166884188229206016000t^{38}x^8 \\
& \quad + 33580701422851604713832448000000x^{32} + 1080534124548936025451100372816550585958400t^{42}x^6 \\
& + 78261087919045404078460527280201836527616000000t^{26}x^6 + 569691225737157613694089947582108480307200t^{38}x^{10} \\
& \quad + 1397867702594243679706152960t^{14}x^{42} + 775967896562435724000284481945600t^{28}x^{28} \\
& - 9687535842725908794439166054413633081835520000t^{30}x^6 + 26327896079109214156445210653929736293580800000t^{32}x^4 \\
& + 9079082704366173723354799272226283166105600000000t^{20}x^6 + 370030755219123862465375099473100800t^{16}x^{30} \\
& \quad - 31917219526197415143014400t^6x^{44} + 1055464327811153912299177810042054248077721600000t^{32}x^2 \\
& \quad + 22029297579649769239562913054720000t^6x^{30} + 18968438825739586181076484305715200t^{14}x^{32} \\
& \quad + 43672408696775422004900659200t^8x^{40} + 710154413770110889085242749406250061004800000000t^{18} \\
& + 991554157040183516804897832960t^{20}x^{36} - 11367375709684689882682028082549204870758400000t^{26}x^8 \\
& \quad + 11825142673659968280498279575401267200t^{26}x^{24} + 364054405688449378810421511507148800t^{26}x^{26} \\
& \quad + 5907383817063125825628747217180860560179200t^{36}x^{10} - 254740935778463046794512800153600t^{16}x^{34} \\
& \quad + 1080530869376474991820800t^2x^{46} + 8622608838434318480804783125954560t^{20}x^{30} \\
& + 31302942669501327231462370504161911793254400000t^{24}x^{10} + 3219931566819171569699389440000t^{14}x^{38} \\
& + 13053438663523538532272008121548800t^{16}x^{32} + 8650401566620721664071010914392046410137600000000t^{22}x^6 \\
& \quad + 118063877469747330534147891005417009971200t^{48} + 2481823821767119878297699116709589706342400t^{46} \\
& \quad + 543904230597162172416x^{50} + 45648289433736689724197748922436812800t^{20}x^{26} \\
& \quad + 669940426670329383668681889426864202579968000000t^{32} + 13467150742190920040448000x^{44} \\
& \quad + 3859192240166944203642301776920139792384t^{50} + 122668013282885302724032975777824768t^{52}x^4 \\
& \quad + 36346078009743793399713474304540672t^{54}x^2 + 136805248917443088331212177643929600t^{38}x^{18} \\
& \quad - 93632239096943916325224520889017565184000000t^{24}x^8 + 5821169411905304087645650944000000t^4x^{28} \\
& + 191342036239999035939672541414355663585280000000t^{20}x^8 + 371901118484883261993018932779705958400000t^{16}x^{20} \\
& \quad + 37003329357294185095946777395200t^{12}x^{36} + 19105654367632550616000416899838555864432640000t^{26}x^{10} \\
& \quad + 17356376707003689428275195753267200000t^{10}x^{26} + 2381700894176955143931931870826279731200t^{28}x^{20} \\
& \quad + 163291584979377057088016167731200t^{18}x^{30} + 3317087208709908342540393370036803861479424000t^{40}
\end{aligned}$$

$$\begin{aligned}
&+19949743481436093500746370440010051868426240000t^{38} + 88334223203356093155824627619722655160074240000t^{36} \\
&+285513342184896281703023311521325333138636800000t^{34} + 37229145319847825841346931872904729591808000t^{44} \\
&+408309996634835024317862613299629029064704000t^{42} + 280061284096626722235773939152275583795200t^{36}x^{12} \\
&\quad -3933711507626610455583129600t^8x^{42} + 15321245932314427392x^{52} \\
&\quad +572272475018713104384000x^{46} - 50454851914006261258956916654080t^{20}x^{34} \\
&\quad -815361962971734529652097338572800t^{18}x^{32} + 8475094292618212226107402877398941696000t^{26}x^{20} \\
&+64982493235785466957325784380866560t^{36}x^{20} + 10048676271162051760255417339823416934400t^{30}x^{18} \\
&+8829349428665843796200735474536727288217600t^{44}x^2 + 9415077144957553451203451714273280t^{32}x^{24} \\
&\quad +201822979760280450367488000x^{42} + 66532088404661391949103250397986816000t^{28}x^{22} \\
&\quad +15107883396368122773504t^6x^{50} + 1313311538231056089376358400t^4x^{42} \\
&\quad +130467652242129410105907609600t^{18}x^{38} + 731625844558136126029248978765578502144000t^{32}x^{14} \\
&\quad +1875823592830478281113387264000000000x^{14} + 17863215261983372286155314644480000000000t^4x^8 \\
&\quad +36777645097490443168763483258880t^{24}x^{32} + 14803160843415012703439323694974290100224000t^{42}x^4 \\
&+110984087539958356906039220923637799321600t^{34}x^{14} + 29397758566824313887161766915971481600000t^{14}x^{22} \\
&\quad +111194021797269383612989440t^{12}x^{44} + 7236588885231229373640461742118010880t^{30}x^{22} \\
&\quad -252492678842386311754780067758080t^{22}x^{32} + 906856257749182584001839074423902253875200t^{44}x^4 \\
&\quad +170609404570580382122322306800332800t^{28}x^{24} + 181059175864568335600066379120640t^{26}x^{30} \\
&\quad +1335521482924218305594838220800t^{10}x^{38} - 135790815206071139580751380480t^{10}x^{40} \\
&\quad +327412592654298879344246784000000t^2x^{28} + 2896946813833093369601062065930240t^{30}x^{26} \\
&+15449976344677306224489753126681834002841600t^{40}x^6 + 621760776109921087243808191827840000000000t^6x^{22} \\
&\quad +552316616030398280682700800t^8x^{44} + 13779819095685999722590371840t^{10}x^{42} \\
&\quad +33653239794156400990147628236800t^{16}x^{36} + 25948356453287239780826873856000000000t^4x^{22} \\
&+1179271563947427468172071274149209702400t^{32}x^{18} + 12787365796513897046977378265333760t^{22}x^{30} \\
&\quad +1172586022019797509734400t^4x^{46} + 76223203924572379781659574959723034915635200000t^{26}x^4 \\
&\quad +26583747232821327391633275428536320t^{34}x^{22} + 86042398635350118031215963741880320000t^{24}x^{24} \\
&\quad +1388036780413212798156800t^6x^{46} + 2810326857433086501841254002397095506477056000000t^{30}x^2 \\
&\quad +394947672921883017216t^2x^{50} - 21760858458628161194421074114939782692864000000t^{30}x^4)
\end{aligned}$$