



I • Sequence Sum Possibilities

Most positive integers may be written as a sum of a sequence of at least two consecutive positive integers. For instance,

$$\begin{aligned}6 &= 1 + 2 + 3 \\9 &= 5 + 4 = 2 + 3 + 4\end{aligned}$$

but 8 cannot be so written.

Write a program which will compute how many different ways an input number may be written as a sum of a sequence of at least two consecutive positive integers.

Input

The first line of input will contain the number of problem instances N on a line by itself, ($1 \leq N \leq 1000$). This will be followed by N lines, one for each problem instance. Each problem line will have the problem number, a single space and the number to be written as a sequence of consecutive positive integers. The second number will be less than 2^{31} (so will fit in a 32-bit integer).

Output

The output for each problem instance will be a single line containing the problem number, a single space and the number of ways the input number can be written as a sequence of consecutive positive integers.

Sample Input	Sample Output
7	1 1
1 6	2 2
2 9	3 0
3 8	4 8
4 1800	5 17
5 987654321	6 1
6 987654323	7 23
7 987654325	