Petr's problem P78605_en

A permutation $p_1, \ldots, p_n$ is a sequence of numbers between 1 and n such that each number appears exactly once. An inversion in a permutation is a pair of indices (i, j) such that $i < j$ but $p_i > p_j$. The weight of an inversion (i, j) is $j - i$.

How many permutations of n elements exist where the sum of weights of all inversions is equal to x? For instance, there are exactly two such permutations for $n = 4$ and $x = 4$: 3, 2, 1, 4 and 1, 4, 3, 2.

Input

Input consists of several cases, each one with n and x. You can assume $1 \leq n \leq 14$ and $0 \leq x \leq (n+1)n(n-1)/6$.

Output

For every case, print the number of permutations of n elements such that the sum of weights of all inversions is x.

Sample input 1

```
4 4
1 0
14 455
14 200
```

Sample output 1

```
2
1
1
486253544
```

Problem information

Author: Petr Mitrichev

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