PROBLEM D: PERMUTATIONS

Input file: PER.IN

Output file: PER.OUT

Problem

Let $A=[a_1, a_2,...,a_n]$ be a permutation of integers 1,2,...,n.
A pair of indices (i, j), $1 \le i < j \le n$, is an inversion of the permutation A if $a_i > a_j$.
We are given integers $n>0$ and $k \ge 0$.
What is the number of n-element permutations containing exactly k inversions?

Example

The number of 4-element permutations with exactly 1 inversion is 3.

Write a program that:

- reads integers n and k from the text file PER.IN;
- computes the number of n-element permutations with exactly k inversions;
- writes the result to the text file PER.OUT.

Input

The only line of the text file PER.IN contains two integers n ($1 \le n \le 12$), and k ($0 \le k \le 97$) separated by a single space.

Output

Your program should write the number of n-element permutations with exactly k inversions to the first line of the output file PER.OUT.

Example

Input file

```
4 1
```

Output file

```
3
```