CCC '15 J5 - π-day

Canadian Computing Competition: 2015 Stage 1, Junior #5

You may know that March 14 is known as "π-day", since 3.14 (which is the third month and fourteenth day) is a good approximation of π.

Mathematicians celebrate this day by eating pie.

Suppose that you have n pieces of pie, and k people who are lined up for pieces of pie. All n pieces of pie will be given out. Each person will get at least one piece of pie, but mathematicians are a bit greedy at times. So, they always get at least as many of pieces of pie as the person in front of them.

For example, if you have 8 pieces of pie and 4 people in line, you could give out pieces of pie in the following five ways (with the first person in line being the first number in the list): $[1, 1, 1, 5]$, $[1, 1, 2, 4]$, $[1, 1, 3, 3]$, $[1, 2, 2, 3]$, $[2, 2, 2, 2]$.

Notice that if $k = n$, there is only one way to give out the pieces of pie: every person gets exactly one piece. Also, if $k = 1$, there is only one way to give out the pieces of pie: that single person gets all the pieces.

Write a program that determines the number of ways that the pieces of pie can be given out.

Input Specification

The first line of input is the integer number of pieces of pie, n ($1 \leq n \leq 250$).

The second line of input is the integer k which is the number of people in line ($1 \leq k \leq n$).

For at least 20% of the marks for this problem, $n \leq 9$. For at least 50% of the marks for this problem, $n \leq 70$. For at least 85% of the marks for this problem, $n \leq 120$.

Output Specification

The output will consist of a single integer which is the number of ways that the pieces of pie can be distributed. The output is guaranteed to be less that 2^{31}.

Sample Input 1

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8
4
```

Output for Sample Input 1

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5
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Sample Input 2

```
6
2
```

Output for Sample Input 2

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3
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