Correct expressions   P68813_en

In this problem we consider the expressions defined as follows:

- Every variable is a correct expresion;

- if x is a correct expression, so is (x);

- if x_1 and x_2 are correct expressions, so are $(x_1) - (x_2)$;

- nothing else is a correct expression.

For instance, if the set of variables is A, B, C, these are some correct expressions:

$$A \qquad (A) \qquad ((C)) \qquad (A) - (B) \qquad ((A) - (B)) - (A)$$

Write a program that, given two numbers n and m, prints the number of correct expressions of length exactly n that can be made up with m variables.

For instance, for $n = 7$ and $m = 2$ the result should be 6, corresponding to

$$(((A))) \qquad (((B))) \qquad (A) - (A) \qquad (A) - (B) \qquad (B) - (A) \qquad (B) - (B)$$

Input

Input consists of several cases, each with two natural numbers n and m between 1 and 25.

Output

For every case, print the number of correct expressions of length exactly n that can be made up with m variables. This number will always be smaller than 10^9.

Sample input 1

```
7 2
1 20
20 1
21 1
25 25
```

Sample output 1

```
6
20
0
212
307378150
```

Problem information

Author: Omer Giménez
Translator: Salvador Roura

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