Bags and boxes P75142_en

Vuitè Concurs de Programació de la UPC - Semifinal (2010-06-30)

You have n distinct objects, x identical bags, and y identical boxes. In how many ways is it possible to distribute the objects into the bags and the boxes so that each bag has at least one object, and each box has exactly one object?

Input

Input consists of several test cases, each one consisting of n, x and y. Assume $1 \leq n \leq 25$, $0 \leq x \leq 25$, and $0 \leq y \leq 25$.

Output

For every test case, print the number of ways to distribute n distinct objects into x identical bags and y identical boxes so that each bag has at least one object, and each box has exactly one object. You can assume that the answer is never larger than $5 \cdot 10^{18}$.

Sample input

```
4 0 4
4 1 0
4 2 0
4 4 0
4 1 2
4 0 3
25 9 2
```

Sample output

```
1
1
7
1
6
0
3696020643539070000
```

Problem information

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