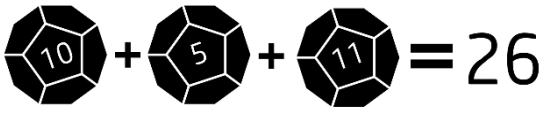
27 Rolling dice game

17 points

Introduction

James Bond enters a casino to play his favourite game: Hold'em Texas Poker. But he got a very bad surprise! In this casino, they only play a very weird game: Rolling Dice! The casino manager throws some dice, and players must bet against the total result that will appear. The total result is the sum of each individual die result.



For every game, the casino manager may roll a different type of die, and a different amount of dice of the selected type! So, which combinations are the most probable?

You are asked to write a program that computes the probability of a certain result given the number of dice and the number of faces of those dice.

HINT: The probability of a certain event is computed as the "positive cases" divided by "the total number of cases". For example, given a die of 6 faces, the probability of getting a 3 is 1/6 = 0.167 and the probability of getting a 22 is 0/6 = 0.000.

Input

The input is set by three non-negative integers separated by spaces:

- The first number is the amount of dice.
- The second number is the amount of faces per die greater than 3.
- The third number is the number of which you want to know its probability.

Output

A sentence specifying the probability for the given input following this format:
`The probability of getting a W with X dice of Y faces is X.XXX`
The probability X must be round to the third decimal and always printed out with 3 decimals.

Example 1

Input

```
2 6 8
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Output

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The probability of getting a 8 with 2 dice of 6 faces is 0.139
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Example 2

Input
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1 12 11
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Output
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The probability of getting a 11 with 1 dice of 12 faces is 0.083
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