

Problem H

Consecutive Dice Throwing

Time limit: 1 second

Miah is playing “Horse Racing Chess”, a game where each move of her horse depends on the number of points rolled on a dice. In this round, she is allowed to roll the die N consecutive times, and the total number of steps her horse will move in the game is determined by the sum of the results from these N rolls.

The “safe zone” is the position that Miah’s horse will land on after N consecutive rolls of the dice. What is the probability that her horse reaches this safe zone? – the safe zone is defined as the interval $[A, B]$ where A and B are the minimum and maximum number of steps the horse can move to it, respectively.



Horse Racing Chess Boardgame

Input

Single line contains three integers N , A and B .

Output

Print the probability rounded to six decimal places (rounding half to even).

Constraints

$$1 \leq N \leq 100.$$

$$1 \leq A \leq B \leq 6 \times N.$$

Sample Input 1

2 9 10

Sample Output 1

0.194444

Sample Input 2

1 2 2

Sample Output 2

0.166667

This page is intentionally left blank.