

Consider the following scenario:

You are a University Student; all of your friends consider you courageous, most of the girls find you handsome, you are quite a good student, recently your team has won a regional contest of ACM ICPC and so your confidence is very high. In a party you find someone nice and ask her to dance but she seems smarter than (as always is the case) you. She tells you,

“There are M gentle men and W ladies in this party except us. You have C candies in your hand and you distribute them randomly among all these guests (M men and W ladies), of course if possible. Now you collect all the candies from all the gentlemen and this number of candies is CC . If you can evenly distribute these (CC) candies equally between two groups (These two groups are two arbitrary groups) I will dance with you.”

Now tell me what is the probability of her dancing with you.

Input

The input file contains several lines of input. Each line contains three non-negative integers M ($M \leq 1000$), W ($W \leq 1000$) and C ($C \leq 100$). The meanings of the symbols are explained before. The input is terminated by a line where $M = 0$ and $W = 0$. You need not process this input.

Output

For each line of input, you should produce one line of output, which is a floating-point number. This output is the probability of her dancing with you. The number contains seven digits after the decimal point. An error less than $2E-7$ or $2 * 10^{-7}$ will be overlooked.

Sample Input

```
10 20 20
10 20 7
0 0 29
```

Sample Output

```
0.5000000
0.5002286
```