

Risiko!

Antonio and Kai both love to play *Risiko!* and they also have fun changing the rules every now and then. One day, they decide to change the numbers of dice that are used to determine the outcome of a battle, as well as the dice themselves, for example, using 8-sided dice instead of the usual 6-sided ones. Let us recall the rules:

1. The attacker rolls m dice and the defender rolls n dice with k sides each.
2. The highest-valued dice are compared to each other and the loser of the comparison loses an army. In case of a tie, the attacker loses.
3. Next, the dice with the second-highest values are compared, etc.
4. After $\min(m, n)$ comparisons, the battle is over.

Help Antonio and Kai to find out which choice of k, m, n is the fairest.

Input

The input consists of the three numbers k, m, n , where $2 \leq k \leq 20$ and $1 \leq m, n \leq 10$, and such that $k^{m+n} \leq 2^{20}$.

Output

The output consists of two floating point numbers indicating the average number of armies that the attacker and the defender lose in one battle, respectively. The numbers should be printed in the format $n.nnnnn$, that is, with 1 decimal digit before and 5 decimal digits after the comma, where the last digit is rounded using the “round half up” rule. That is, 1.012345 should be printed as 1.01235 and 1.0123449 as 1.01234.

Examples

Sample input 1

```
6 3 2
```

Sample output 1

```
0.92091
1.07909
```

Sample input 2

```
4 4 2
```

Sample output 2

```
0.86914
1.13086
```

Sample input 3

```
2 1 1
```

Sample output 3

```
0.75000
0.25000
```

Limits

Time limit is 1 second.

Memory limit is 256 megabytes.