Birthday Cake

Input file:	standard input
Output file:	standard output
Time limit:	1 second
Memory limit:	256 megabytes

Meow's birthday is coming. To celebrate his birthday, his friends bought him a rectangular cake with sides X and Y.

Now including Meow, there are a total of N individuals to share this big cake, and everyone must get the cake with the **same area**.

Meow will be the one in charge of cutting the cake, but he has to follow a particular rule. He can make a cut only if the cut is parallel to one side (any side) of the cake, and the cake must be cut into two pieces.

Thus, to slice the cake into N pieces, Meow must slice $N - 1$ times.

In order to make each piece of cake look beautiful, Meow would like the maximum value for the ratio of the long side to the short side of all those N pieces to be the smallest.

Can you help Meow find this ratio?

Input

The input contains 3 integer – X, Y, N ($1 \le X, Y \le 10^4, 1 \le N \le 10$) – the length of the cake, the width of the cake, and the number of pieces the cake should be cut into.

Output

Print a single float number, the ratio, with accuracy up to 6 decimal places, rounded off.

Example

standard input	standard output
5 5 5	1.800000

Note