

## Problem A. Manhattan

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

In Manhattan, there are streets  $x = i$  and  $y = i$  for each integer  $i$ . It is known that both Snuke's house and Smeke's house are on streets, and the Euclidean distance between them is exactly  $d$ . Compute the maximal possible distance between their houses when they travel along streets.

### Input

The input contains one number  $d$ .

- $0 < d \leq 10$
- $d$  contains exactly three digits after the decimal point.

### Output

Print the answer. The answer is considered to be correct if its absolute or relative error is at most  $10^{-9}$ .

### Examples

standard input	standard output
1.000	2.000000000000
2.345	3.316330803765