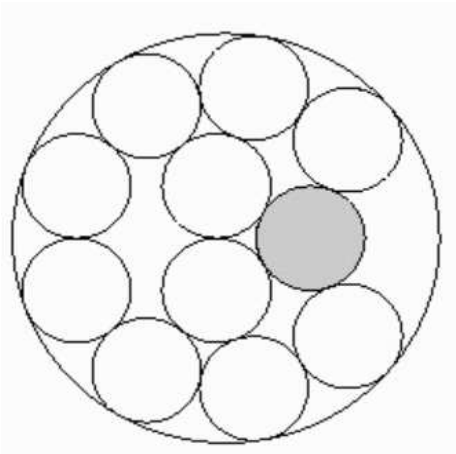
Task: KOL
Eleven Circles

UFAM Workshop, contest #4. Source file `kol.*` Available memory: 128 MB.

Byteasar would like to solve the following mathematical problem: he consider a circle of radius R and he would like to inscribe inside this circle 11 smaller circles of radiuses r in such a way that r is as big as possible. The following image shows an optimal solution for this problem:



But calculating value r is too hard for Byteasar. Help him.

Input

In the only line of the input there is an integer R ($0 \leq R \leq 1\,000\,000$), specifying the radius of the big circle.

Output

In the only line of the output you have to print a real number r – the maximal radius of small circles. Your answer must be correct up to 6 places after decimal dot (i.e. the absolute error should not be bigger than 10^{-6}).

Example

For the input data:	the correct result is:
`15.396240970739205`	`3.923804400163`