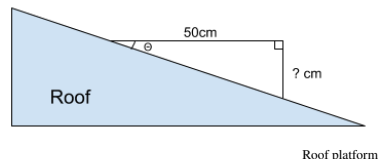


Painting the roof

Problem ID: a01p09painting

You are painting your roof. You have a 10 liter can of paint that is filled to the brim. That poses a bit of a problem because you can not put it down on the roof because it is tilted, otherwise the paint will spill. You decide to build a simple platform on which to place the can of paint. You already have one piece of plywood that is sized at $50\text{cm} \times 50\text{cm}$. You are going to screw another piece of wood at a right angle at the end of it to make the platform perfectly level while placed on the roof.



You have a cool app on your phone that allows you to measure the roof's angle in degrees, denoted as Θ in the diagram. Now it is time to put your programming skills to use to calculate the exact height of the second piece.

Hint: the math module in Python contains commonly used trigonometric functions.

Input

Input consists of one line with one integer d , the roof's angle in degrees, where $0 \leq d < 90$.

Output

Output consists of one line with one floating point number, the height of the second piece, rounded to 1 decimal place.

Sample Input 1

0

Sample Output 1

0.0

Sample Input 2

14

Sample Output 2

12.5

Sample Input 3

45

Sample Output 3

50.0