Mr. Big Face!

ZPRAC-16-17-Lab3

[20 Points]

Amlan and Nirbhay are having a fight over their face size (areas). Amlan, with a rectangular face believes that his face is larger than Nirbhay's circular face. While Nirbhay believes that his circular face is larger. Bikas, being part of the helpful Popcelling service, decides to resolve the conflict. But, he always slept in his mathematics classes and doesn't know anything about shapes and areas. He is now asking for your help in resolving the conflict. You are given the shapes and dimensions of their faces as input and you have to calculate the area of the given shape.

Input: Input contains a character denoting the shape of the face, 'R' standing for a rectangle, 'C' for 'a circle. It is followed by the dimensions of the given shape. There are two cases to consider,

1. 'R' : Represents a rectangle. In this case, it is followed by two floating point numbers l, w (Length and width)

2. 'C' : Represents a circle. In this case, it is followed by a floating point number r (The radius).

Note that $0 \leq r, l, w \leq 1000$)

(Take the value of π to be 3.141593 for the problem)

Output: The area of the given shape rounded off till 3rd decimal place.

Example:
Input:
R 1 2
Output:
2.000
Input:
C 1
Output:
3.142