



# Practice Arena

Practice problems aimed to improve your coding skills.

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  - ❓ Rich Mr C
  - ❓ Perfect Numbers
  - ❓ Mr C builds a Calculator
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  - ❓ Mr C is very busy
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# Rich Mr C

## LAB-PRAC-05\_CONDLOOPS

**Rich Mr C [20 marks]****Problem Statement**

The family of Mr. C is super rich. Each sibling of Mr. C has a single but vast piece of land in the outskirts of Kanpur city. The shape of the lands owned by siblings of Mr C can be either a square or a triangle. They want to sell their lands but they don't have the information about its area. All they know is the shape of their land and length of sides. They ask Mr. C to help them with the calculation of the area.

You are given as input, the shape of the land (represented as an integer as shown below). If the shape is a square, you are given its side length. If the shape is a triangle, then all three side lengths are given. Side lengths may be given as **non-integers**. Print the name of the shape and its area **rounded to three decimal places**. These two outputs must be printed on **different lines**.

**Caution**

1. Use **double variables** and double typecasting while doing area calculations to avoid loss of precision. Do not use float variables and float typecasting.
2. Be careful about extra/missing lines and extra/missing spaces.
3. A square is represented by the integer 0
4. A triangle is represented by the integer 1
5. To calculate the area of triangle, Mr. C recalls the Heron's formula from his high school. If a, b, c are the side lengths of a triangle, then if we let  $s = (a + b + c)/2$  then

$$area = \sqrt{s(s-a)(s-b)(s-c)}$$

**EXAMPLE:**

INPUT

0 2

OUTPUT:

Square

4.000

**Grading Scheme:**Total marks: **[20 Points]**

There will be partial grading in this question. There are two lines in your output. Printing each line correctly, in the correct order, carries 50% weightage. Each visible test case is worth 2 points and each hidden test case is worth 4 points. There are 2 visible and 4 hidden test cases.

Please remember, however, that when you press Submit/Evaluate, you will get a green bar only if all parts of your answer are correct. Thus, if your answer is only partly correct, Prutor will say that you

have not passed that test case completely, but when we do autograding afterwards, you will get partial marks.

 **Start Solving!** (</editor/practice/6078>)