

1.1.1. Area of Circle

Write a Python program that calculates the area of a circle when the radius is provided by the user. Use $\pi = 3.14$ and display the area.

Input Format:

- A single line containing a floating-point number representing the radius.

Output Format:

- Print the computed area of the circle formatted to 4 decimal places.

```

1  #Read the radius as a float
2  radius =float(input())
3
4  #define the value of pi
5  pi =3.14
6
7  #calculate the area
8  area =pi * radius * radius
9
10 #display the area formatted to 4 decimal places
11 print(f'{area:.4f}')
12
13
14
15
16
17
18
19
20
21
22
23
24
25 1962.5000
== YOUR PROGRAM HAS ENDED ==

```

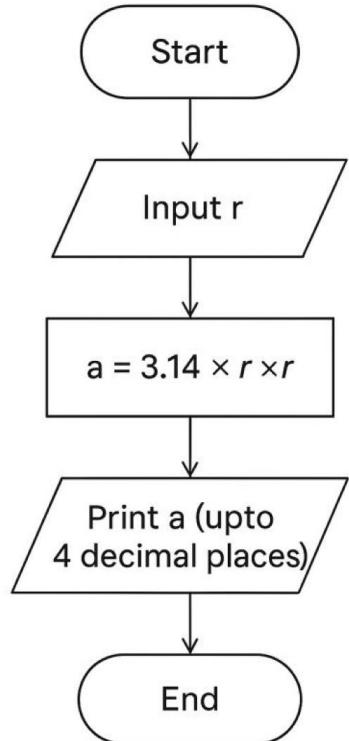
Start

Input: Read the radius (r).

Process: Calculate the area by multiplying $3.14 * r * r$.

Output: Print the result (formatted to 4 decimal places).

Stop



1.1.2. Area of Rectangle

Write a Python program to calculate the area of a rectangle given its length and width.

Formula:
 $\text{Area of Rectangle} = \text{Length} \times \text{Width}$

Input Format:

- First line contains a float value representing the length of the rectangle
- Second line contains a float value representing the width of the rectangle

Output Format:

- Print the area of the rectangle as a float value formatted to 2 decimal places.

```

1 length=float(input())
2 width=float(input())
3 area = length * width
4 print(f'{area:.2f}')

```

20
20
400.00
==== YOUR PROGRAM HAS ENDED ====

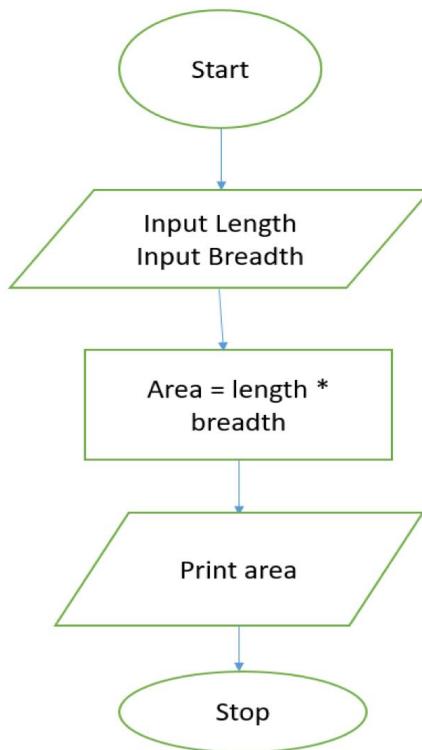
Start

Input: Read length and width.

Process: Calculate the area by multiplying length *width.

Output: Print the result (formatted to 2 decimal places).

Stop



1.1.3. Calculate Area of the Square

Write a Python program that prompts the user to enter the *side_length* of a square and computes the area of the square.

Formula:

- $\text{Area} = \text{side_length}^2$

Input Format:

- The input is a positive integer value that represents the *side_length* of the square.

Output Format:

- The output is a positive integer value that represents the area of the square.

```

1 side_length=int(input())
2 area=side_length * side_length
3 print(area)
4
5
6
7
8
9
10
11

```

720
518400
==== YOUR PROGRAM HAS ENDED ====

Start

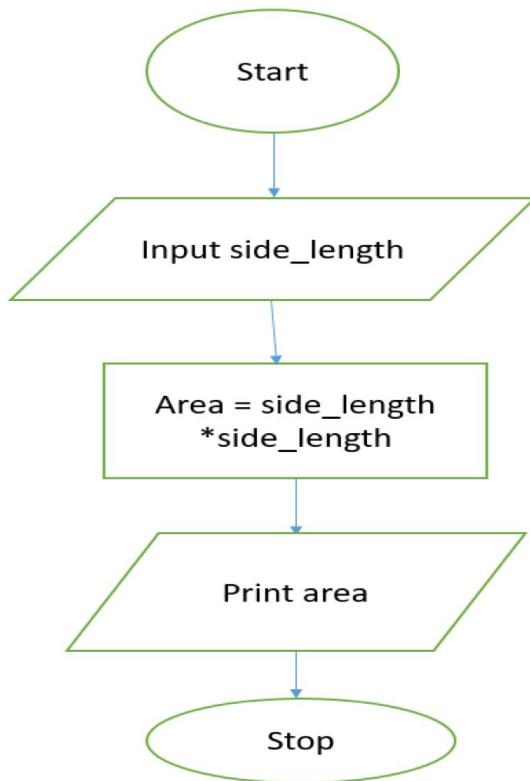
Input: Read the value for *side_length* from the user.

Process: Convert the input value to an integer.

Calculation: Calculate the area using the formula: $\text{Area} = \text{side_length}^2$

Output: Print the calculated area.

Stop



1.1.4. Area of Triangle

Write a Python program that prompts the user to enter the triangle's base and height and computes the triangle's area.

Formula: $\text{Area of Triangle} = 0.5 \times \text{base} \times \text{height}$.

Input Format:

- The first line of input is the float value that represents the base of the triangle.
- The second line of input is the float value that represents the height of the triangle.

Output Format:

- The output is the floating point value that represents the area of a triangle, formatted to two decimals.

```

1 base=float(input())
2 height=float(input())
3 area_of_triangle=0.5*base*height
4 print(f'{area_of_triangle:.2f}')

```

67
4
134.00
==== YOUR PROGRAM HAS ENDED ====

Start

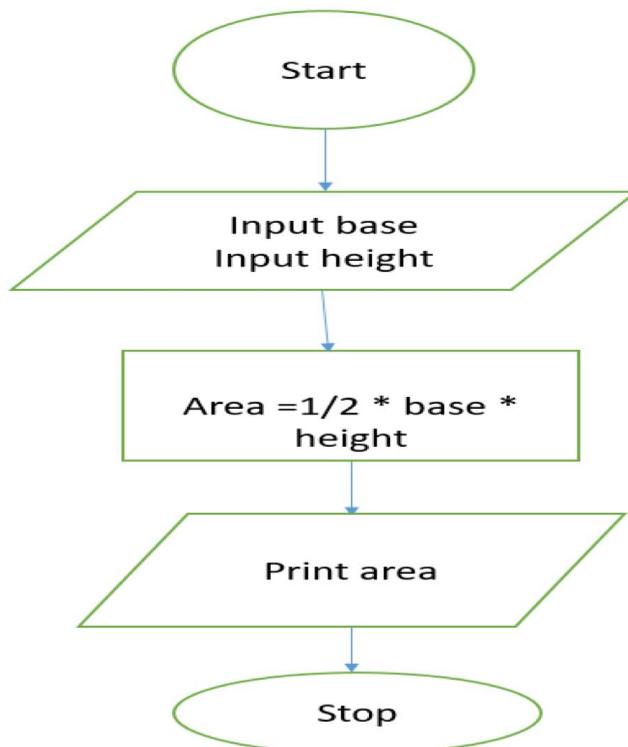
Input 1: Read the first value from the user and store it as base.

Input 2: Read the second value from the user and store it as height.

Calculation: Calculate the area using the formula = $\text{Area} = 0.5 \times \text{base} \times \text{height}$

Output: Print the calculated area, formatted to exactly two decimal places.

Stop



1.1.5. Student Pass or Fail Status

Write a Python program to determine whether a student passed the exam or not based on their marks.

Pass/Fail Criteria:

- A student passes if marks ≥ 40
- A student fails if marks < 40

Input Format:

- Single line contains an integer representing the marks obtained by the student.

Output Format:

- Print "Pass" if the student passed the exam.
- Print "Fail" if the student failed the exam.

```

1 marks = int(input())
2 if marks >= 40:
3     print("Pass")
4 else:
5     print("Fail")
57
Pass
==== YOUR PROGRAM HAS ENDED ====

```

Start

Input: Read the marks from the user.

Process: Convert the input to an integer.

Decision: Check if marks is greater than or equal to 40.

If Yes: Print "Pass".

If No: Print "Fail".

Stop

