

Challenge - Area and Volume Calculator

The object of this challenge is to create functions that can accept arguments and return values.

Mild 🌶️

Create 2 functions from the following choices:

| Function | Input | Output |
|----------------|--|-----------------|
| Rectangle Area | <div>l (length)</div> <div>w (width)</div> | <div>area</div> |
| Triangle Area | <div>b (base)</div> <div>h (height)</div> | <div>area</div> |
| Circle Area | <div>r (radius)</div> | <div>area</div> |

Then create a program that satisfies the following requirements:

- For each function you created:
 - The user provides input.
 - The program uses your function to calculates the area of that shape.
 - The program outputs a message displaying the calculated area and what shape that area is for.

Medium 🌶️🌶️

Create the following function:

| Function | Input | Output |
|-------------|-----------------------|-----------------|
| Circle Area | <div>r (radius)</div> | <div>area</div> |

For your function create 3 tests using `pytest`:

- The function must have at least one test that `asserts` that 2 values are approximately equal.
- The function must have at least one test that `asserts` that 2 values are not approximately equal.

Then create a program that satisfies the following requirements:

- For each function you created:
 - The user provides an input.
 - The program uses your function to calculate slope.
 - The program outputs a message displaying the calculated area.

Spicy 🌶️🌶️🌶️

Create the following 2 functions:

| Function | Input | Output |
|-----------------------|---|-------------------------|
| Cylinder Volume | <div>r (radius)</div> <div>h (height)</div> | <div>volume</div> |
| Cylinder Surface Area | <div>r (radius)</div> <div>h (height)</div> | <div>surface_area</div> |

For each of your functions create 2 tests using `pytest`:

- Each function must have one test that `asserts` that 2 values are approximately equal.
- Each function must have one test that `asserts` that 2 values are not approximately equal.

Then create a program that satisfies the following requirements:

- For each function you created:
 - The user provides an input.
 - The program uses your function to calculate slope.
 - The program outputs a message displaying the calculated value and what the value is (*for example, volume of a cylinder*).