

grade: check -

upgrade to check or check + by completing missing answers.

## A simple C++ Program

1) I will be using Atom as an editor.

- Area and radius are user friendly and make the input file easier to understand.

2) ./area.x runs the file in the current directory

when I added `<<endl`, nothing happened.  
I'm not sure why.

I got ">" in the terminal

3) The errors are not noticed immediately because some of the code uses files that must be included at the top of code to be used later on.

4) a. I compared my answers to my calculator

b. I checked to make sure the unit circle had area  $\pi$

5) My volume.cpp worked correctly

| 6) Command    | C++ code  | Python code                          |
|---------------|---|--------------------------------------|
| define $\pi$  | <code>const double pi = #</code>                    | <code>pi = #</code>                  |
| area equation | <code>double area<br/>= pi * radius * radius</code> | <code>area = pi * radius ** 2</code> |
| show output   | use <code>"cout"</code>                             | use <code>"print"</code>             |

## Overflows, Underflows

1) Output becomes a .out file in my PHY\_905 directory and also goes into my terminal.

a. Single precision

underflow @

overflow @

b. double precision

underflow @

overflow @

Missing #'s.

I can assist if you need help.

## Using a makefile

2) Yes, mine was successful

3) Also, a success

## Using the GSL Scientific Lib.

1) Make sure they give the same output when  $x=5$

3)  $J_0(3) = -0.260051954$

4) MATLAB

$J = \text{besselj}(0,3)$

$J = -0.2601$  ✓ success!

5) Didn't get to this pls finish