**CIS 1275 C++ Programming I Name:**

**Quiz 3 Volume of a Cone Date: November 3, 2014**

**Functions**

**Turn in Requirements:**

1. Name your project LastnameQ3, such as BurnsQ3.
2. Please print your source code (Driver.cpp and cone.cpp) file and attach it to this page.
3. Remove the debug and .sdf files and then upload your zipped project to Blackboard.

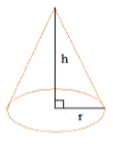
**Program Requirements:**

1. **3 pts.** Write your name, email address and file name at the top of your source code in a comment.
2. **5 pts.** Use cout statements in a function to write your name, program title, and program objective to the screen so that it is the first thing I see when your program runs. This is your course header and should be a function.
3. **5 pts.** Add comments as appropriate. Be sure that your program output is neatly presented to the user.

The C++ Cone Volume Program will allow a person to enter the dimensions of a cone and the program will calculate and cout to the screen the volume of that cone.

This program requires functions. Place the function prototypes in a file named Cone.h. Place the associated function bodies in Cone.cpp. Call all functions from main, which is located in your Driver.cpp. Please print a copy of your Driver.cpp and Cone.cpp. Staple them to this paper when you turn in your project for grading

First, call your header function, then start a do while or while loop so the user can calculate many cone volumes. Your main function should ask the customer cone’s height and radius. Be sure to tell the user how to enter this information. Pi should be assigned the value of 3.14159265, using either a # define or a constant. You will need variables for the height and radius of the cone. Do not assume that your cone is measured in whole inches. You will also need a variable for the volume of the cone. Your main function should call the CalcConeVolume function and pass the cone’s height and radius into the function. The function should return the volume to main. The main function will then call the WriteConeVolume function to cout the information to the screen. This would be a nicely formatted report that tells the customer the height and radius of the cone, and total volume of the cone in cubic inches. There is no return from the function.

  
Here is a list of the names of the functions you will need. You write the prototypes and bodies. You decide what variables to pass to each function and what, if anything, to return. All functions are called from main.

|  |  |
| --- | --- |
| **Prototype Name** | **Content** |
| Header | Write your program header |
| CalcConeVolume | Calculate the volume of the cone using:  volume = (pi \* r2 \* h)/3 |
| WriteConeVolume | In the function, cout the dimensions of the cone and the total volume of the cone. |

Give your customer the opportunity to find the volume of more cones, and then when he/she is finished, write a Good-Bye message.