# **HW\_3-1 (a, b, c) - (3 parts)**

**HW\_3-1a - Create a new project and .cpp file**

**Your program should do the following**

* Declare a constant global variable of float data type.
  + Name it: *TAX\_RATE* 🡨 Remember, constant variables should be all uppercase
  + Assign it a value of: 0.07
* Prompt the user for January sales
* Read in January sales 🡨 Note: When a program deals with money,
* Prompt the user for February sales use float or double variables.
* Read in February sales
* Prompt the user for March sales
* Read in March sales
* The program should then compute the total sales for all three months
* The program should then compute the amount of tax for the total sales
  + The tax is equal to the total sales times the tax rate. (Use the TAX\_RATE variable in the expression).
* Output the amount of tax to the screen as shown in the following output:
  + The output should be formatted to output decimal numbers (not scientific notation).
  + The output should show the decimal point and trailing zeros (like: 22.00).
  + The output should be formatted to two places to the right of the decimal point.
  + The output should show the dollar sign before each number.

**/\* OUTPUT**

Enter January sales: 1101.55

Enter February sales: 2321.22

Enter March sales: 3313.12

Total sales for the first three months is $6735.89,

and the amount of sales tax is $471.51

Press any key to continue **/\***

**HW\_3-1b -** **Create a new project and .cpp file**

**Your program should do the following**

* Prompt the user for the first number (int data type)

/\* OUTPUT

Enter the first number: 126

Enter the second number: 31

126 divided by 31 equals 4

with a remainder of 2.

Press any key to continue \*/

* Read the first number.
* Prompt the user for the second number (int data type)
* Read the second number
* Write code to calculate the quotient and remainder

when the first number is divided by the second number.

* Make sure to used variables in your output statements.

**HW\_3-1c -** **Create a new project and .cpp file**

**Your program should do the following**

* Prompt the user for the base value (double data type)
* Read the base value.
* Prompt the user for the exponent value (int data type)
* Read the exponent value
* The program should use a <cmath> function to calculate the base raised to the exponent.

(see output)

* The program should use a <cmath> function to calculate the square root of the base.
  + Format the output to two places to the right of the decimal. (see output: 1.73)
* The following output should be displayed on the screen:

**/\* OUTPUT**

Enter the base: 3 🡨 The user enters 3

Enter the exponent: 2 🡨 The user enters 2

3 to the 2 power equals 9.

The square root of 3 equals 1.73

Press any key to continue \*/

Note: For all 3 parts, include an information section at the top of each program. (See syllabus)

* Include your name, class, and homework in comments.
* Make sure to include the separator lines as shown in the syllabus.

Copy and Paste the output below your source code.

**Classroom:** Staple all 3 parts of HW\_3-1 (3a, 3b and 3c).

NOTE: UNSTAPLED HOMEWORK will not be accepted.

Turn in a copy of your source code and output at the beginning of the next class.

Make sure you include an **information section** at the top of each program. (See syllabus)

**Online class** Submit all 3 programs BY CANVAS

HW\_3-1 (3a, 3b and 3c).

(Do this for **all homework** for the entire semester.)

**IMPORTANT:** **FOR THE ENTIRE SEMESTER**, SUBMIT YOUR HOMEWORK ON CANVAS IN A

WORD DOCUMENT OR A TEXT FILE, NOT A PDF OR IMAGE.