CS1428 Lab 2h

Name: Section:

Write your name at the top of this sheet. Turn in this sheet along with all requested printouts before the end of class. You may use my web materials, your note book or text book to answer these questions. (100 pts)

1. (10 pts) Write an if statement to compare the value of x, a variable inputted by the user, to the named constant NUM, which you must declare to any value (0<=NUM<=256). You must prompt the user for the value of x.
2. (10 pts) Evaluate the logical expressions. Write the answers on this work sheet. Do **NOT** use the computer to evaluate these expressions:
   1. T&&F

* 1. T||F
  2. F&&F
  3. !(T&&T)
  4. !T&&T

1. (10 pts) Just like in our last lab, we are going to use named constants to represent operations that we want our program to perform. Declare the following named constants with the given values: (All are integer constants)  
   OP\_ADD is 0 OP\_SUBTRACT is 1 OP\_MULTIPLY is 2 OP\_DIVIDE is 3

OP\_MOD is 4 OP\_EXPONENT is 5 OP\_READ is 6 OP\_WRITE is 7

1. (10 pts) What is the output for the following snippet of code?

**int** **main**()

{

**int** x = 3;

**bool** y = **false**;

cout << x++ << **endl**;

**if**(y && ++x == 5)

{

cout << "Hooray!"<<**endl**;

}

**else**

{

cout << "awww...."<<**endl**;

}

cout << x << **endl**;

**return** 0;

}

1. (60 pts) You will need to make a program **lab02h.cpp** that will function as a basic calculator. Declare the same constants done in question 3 in your program. Declare 4 integer variables **inst, data0, data1, data2**. You will prompt the user to input the value of **inst,** which will be the numerical interpretation of the operation you wish to perform, and then the values of **data1** and **data2**, which are the two numbers to perform the operation on. Use **if** statements to write out the calculator for **ALL** the options. The results of the calculations should be stored in **data0.** If there is an option that you cannot perform, merely output “Unable to perform operation, assigning data0 to -1” and assign **data0** to -1. Output a message to the user that their calculation is done and the result. **Upload your source to my homework upload folder and staple a hard copy of the lab to the back of this worksheet.**
2. **(10 pts) \*\*BONUS\*\*** What is the logical equivalent of the following statement and what law does it follow? (p and q represent two different values)

!(p&&q)