HW2: Released Monday, week 2 and due Thursday, week 2

1. List any students you discussed with on this homework assignment: _____

These should still be your own answers, but it is ok to check answers and discuss your reasoning with your classmates.

Running code snippets from the homework is ok, but please take a moment to read through the code yourself first and figure out what you think it will do—you will learn how the code works much better if you think through it first before checking, *especially* if your initial assessment was wrong.

2. Beginning a C++ Program (2 points)
   Not including any comments that may appear, what are the first two lines that typically begin a C++ program that is either going to output on the screen and/or read input from the keyboard?

3. Ending a C++ Program (1 point)
   What return value is the recommended one to end a C++ program that finished as expected (without any errors while running)?

4. Compiler Error (1 point)
   Give an example of an error in code that would produce a compiler error

5. Compiler Warning (1 point)
   Give an example of an error in code that would produce a compiler warning

6. Input (1 point)
   Assuming the variable age has already been declared as int age; what single statement of code will read in a value for age from the user?

7. Compilers (1 point)
   In one sentence, what is the role of a compiler?

8. Code Snippet 1 (1 point)
   If the following statement were in a C++ program, what would it do?
   ```
   cout >> "A penny saved";
   ```

9. Code Snippet 2 (1 point)
   If the following statement were in a C++ program, what would it do?
   ```
   cout << "Is a penny earned.";
   ```

10. Fixing Compiler Errors (2 points)
    What are the two things to look for in a compiler error to start fixing it?

11. Variable Naming (2 points)
    Select all of the VALID variable names from the list:
    1elem
    a1234
    BEST_var
    g_r_e_e_n
    _var
    myvariable
    double
    t
    v4r1a8le_
    my.variable

12. Declaring a Variable (2 points)

    (1 point) What are the three components of declaring a variable?

    (1 point) Which one is optional (from the compiler's point of view)? Note that this doesn't mean it doesn't exist, just that you do not have to write it.

13. Code Snippet 3 (2 points)
    Given the following code:

```
double x = 1.56;
int y = 12;
int z = y + 2 * x;
cout << z << endl;
```

    (1 point) What will be printed?

    (1 point) Why?

14. Code Snippet 4 (1 point)
    What will be the value of `result` after the following code?

```
bool a = 1;
bool b = 0;
bool c = 0;
bool result = (b && c || !a && !b) && (b || c);
```

15. = vs. == (2 points)
    What is the difference between = and == (or, where should each one be used)?