CS 1400 Fall 2017 - Exam 1 Study Guide

- Basic C++ Program Pieces
    - #include statements (iostream, fstream, cmath, string)
        - Why/when we use them
    - main function (entry/starting point)
    - std namespace
- Data Types
    - int, float, double, char, string, bool
- Variables
    - Declaring, initializing, and assigning new values
- Constants
    - Why we use them and how to declare them
- Operators
    - Math Operators: +,-,*,/,%,=
        - Assigning between differing types (i.e. a float value to an int)
        - Integer division
        - Don't overlook the modulus operator (%)
    - Relational Operators: >, >=, <, <=, ==, !=
    - ++, -- (prefix and postfix)
    - +=, -=, *=, /=, %=
- Math Functions
    - sqrt, round, pow
- Type Casting
    - static_cast
    - What it does and why/when to use it
- Console Input/Output
    - cout and the insertion operator: <<
    - cin and the extraction operator: >>
- File Input
    - Ifstream and the extraction operator
    - Opening/closing files
- If Statements
    - if
    - if, else
    - if, else if, else
    - Reading code with if statements
- While Loops
    - Counters
    - Running totals
    - Reading all contents from a file
    - Reading code with loops
- Functions
    - Function definitions and prototypes
    - Function parameters
    - Returning data from functions
        - Returning nothing (void) from a function
    - Calling functions
        - Passing parameters and using the returned value
    - Reading code with functions