CS 161 Recitation
Worksheet: Week 2

1. Go over Quiz #1 answers.

2. Go over Worksheet #1.
   - At this time, the binary conversions are not important for this class, but the understanding that everything is stored as 1s and 0s in the computer is! Here are three important concepts to understand:
     o The characters, integers, floating point numbers, etc. are stored as 1s and 0s
     o The type is what determines how to store and interpret the 1s and 0s.
     o Types can be signed or unsigned, which means the leading bit is used to for a sign (positive or negative) or as part of the positive number.

   - After having class, what do you not understand from questions #7-10 of Worksheet 1?

3. What do you not understand from the material covered in class so far? Examples:
   - **Terms to define:** rvalue vs. lvalue, pre and post increment/decrement, %, operand vs. operator,
   - What are two ways you can create a constant in C++? What are the pros and cons to each?
   - What is an expression? What does x *= 3 mean?
   - What is floating point arithmetic? What is the outcome of the following and why?
     ```
     cout << 5/2;
     cout << 5.0/2;
     int x=10;  cout << x/20;
     int x=10;  cout << x/20.0;
     int x=10;  cout << (float) x/20;
     float x=10;  cout << (int) (x/20);
     ```

4. Additional topics: (Will be covered in Week 2 lectures)
   Reading input from the user:
   o How do you use cin?
   o What happens if you read input that doesn't match the variable?
   ```
   int x; cin >> x;  //user enters t or 10.5?
   ```
   o What happens if you read input into two variables with one cin?
   ```
   int x, y; cin >> x, y;  //every variable needs its own cin
   ```
   o What happens if you read input into the variable before declaring it?
   ```
   cin >> x;  int x;  //where does the program fail?
   ```

   Conditionals (if/else blocks):
   o What are relational operators? How do they work?
   o What are logical operators? How do they work? What is short circuiting?
   o **Create an if/else block for deciding what you'll eat for dinner tonight.**