Assignment 1

Create a subdirectory of your home directory called `a1`. Inside it, place your solutions to the problems below. For each problem, create an executable with the same name as the program you are compiling. You can check how well you are doing by running the following command:

```
handin --hwcheck a1
```

The due date for this assignment is June 18, 2019. To turn in your work, run the following command from your home directory before the due date:

```
handin a1
```

Remember to properly format your code. Format the input / ouput functionality of your code to exactly match that of the examples below each problem.

1. Write a C program called `perimeter.c` that accepts a single integer that represents the length of one side of a square. Print the perimeter of the square.

   Example input:

   ```
   ./perimeter
   Enter the length: 15
   ```

   Example output:

   ```
       Length: 15
   Perimeter: 60
   ```

2. Write a C program called `perimeter2.c` that accepts two integers, one representing the length of a rectangle and the other representing the width of a rectangle. Print the perimeter of the rectangle.

   Example input:

   ```
   ./perimeter2
   Enter the length: 15
    Enter the width: 20
   ```

   Example output:

   ```
   Length x Width: 15 x 20
         Perimeter: 70
   ```

3. Write a C program called `greeting.c` that accepts two strings, the first representing a first name, the second representing a last name. Output a greeting to the user.

   Example input:

```
./greeting
Input first name: Gage
 Input last name: Golish
```

Example output:

```
Hello Gage Golish, how are you?
```

4. Write a C program called `check.c` that accepts a single character as input. Output a check sign composed of the input character. See example below.

   Example input:

   ```
   ./check
   Input a character: *
   ```

   Example output:

   ```
           *
          *
         *
   *       *
    *    *
     * *
      *
   ```

5. Write a C program called `operators.c` that accepts two numbers, x and y, as input. Note that these numbers may be any number, not just integers. Output the result of $x + y$, $x - y$, $x \times y$, and $\frac{x}{y}$.

   Example input:

   ```
   ./operators
   Input x: 6.33
   Input y: 7.14
   ```

   Example output:

   ```
   x + y = 13.47
   x - y = -0.81
   x * y = 45.20
   x / y = 0.89
   ```

BONUS: Write a C program called `bonus.c`. It should accept a single integer as input. It should output the integer backwards. Hint: A decimal is base *ten*.
Example input:

```
./bonus
Input an integer: 9658
```

Example output:

```
8569
```