Counted Iteration Using `for` Loops

The `Range` Function

1. What values are returned by each call to range?
   ```
   a. range(5,10)
   b. range(3,17,2)
   c. range(9,3,-1)
   d. range(2,8,-1)
   e. range(7)
   ```
2. What are possible values of a, b and c in range(*a*, *b*, *c*) that could produce each set of values?
   ```
   a. 0, 1, 2, …, 500
   b. 8, 12, 16, …, 32
   c. 19, 16, 13, …, -5
   ```

For Loops Using `range`

3. Print your name 1000 times to the screen. Count all 1000 names to verify your loop worked.†
4. Write a for loop that outputs the numbers 0 through 20 to the screen.
5. Write a for loop that outputs the numbers 0 through 20 in reverse order.
6. Calculate the mean (average) of 5 test scores, using a for loop containing a single variable that represents the currently entered score.
7. Read two positive integers, m and n, and print an rectangle of stars. For example, if *m*=5 and *n*=8 then your program should display the rectangle below.
   ```
   * * * * * * * *
   * * * * * * * *
   * * * * * * * *
   * * * * * * * *
   * * * * * * * *
   ```
8. Repeat Q7, but display a hollow rectangle instead. Hint: count the spaces!
9. Read an odd, positive integer *k* and prints a triangle pattern consisting of an odd number of stars in each row, and k stars as the base. For example, if *k*=4 then your program should display the pattern below.
   ```
   *
   * * *
   * * * * *
   ```

For Loops Without `range`

10. Read a string from the user, then use a for loop to print the string vertically, one character per line.
11. Ask the user to enter a positive integer, but represent it as a string instead. Use a for loop to determine whether the integer contains a 7.
12. Ask the user to enter a positive integer, but represent it as a string instead. Use a for loop to find the sum of the digits of the integer.

† Kidding! Please do not do this!