COSC 101: Spring 2018
Lecture 06: Modules and for loops

1) More about for loops
   a) An Introduction to the accumulator pattern

   Revisit the average program – We have another tool now - the for loop. How might that change our program?

   b) What does the following loop do?

   for item in “My String”:
     print(item)
2) Math Module
   a) What is the result of the following statements in python? Are there any errors?

       a = 6
       b = 1.5
       c = math.ceil(a * b)

   b) What is the result of the following statements in python?

       a = 25
       b = a.sqrt()  
       print(b)
c) Write a program that finds the length of the side of a right-angled triangle that is opposite the right angle, given the lengths of the other two sides. Your program should use the math module.

d) Extend the program from above so that the resulting triangle is then draw with the turtle. What else do we need for this program?
3) Random Module
   a) Suppose we want to write a program that plays ‘Guess My Number’ with the user? The program picks a number between 1 and 10, then gives the user three chances to guess the number correctly. The program should give feedback to the user about whether the number they guessed is higher or lower than the correct number.
   i) In English what steps do we need to make this program work?

   ii) Write the program described above.