

CS 8 – Introduction to Computer Science
HOMEWORK 2
Print this form and write your answers on it.

SCORE: (out of 40)

Submit this homework (hardcopy) to class. DUE DATE is 04/20/17.

Name: _____

Email: _____@umail.ucsb.edu

Lab Time Circle one: 3 PM 4 PM 5 PM 6 PM

To answer some of the questions on this homework, it will be very helpful to have a computer system running Python version 3.x (e.g., 3.4.3) available to you. To find such a system, you can either:

- Log on to one of the computers in the CSIL computer lab, and access Python 3 there - see posted Lab00 for instructions.
- Download Python 3 to your PC or Mac, and access Python 3 there.

1. Read at least pages 23-28 about Abstraction and using the turtle module. You may like to try the statements from the book as you read about them - you'll learn more, and have more fun if you do. Remember that if you want to use the turtle module, first you must type the following command at the Python prompt:

>>> import turtle

Then, answer these questions:

- a. (2 pt) What do you type to create a new turtle object called Camilla?

- b. (4 pts) What do you type to make Camilla to move forward 75 pixels? What direction is Camilla heading (N, S, E, W)? What angle is that considered to be?

- c. (2 pts) What do you type to make Camilla change her angle to 45 degrees clockwise to her current position?

- d. (2 pts) The book mentions parameters. What are those and where did you use those in the questions above?

2. (10 pts) Write a defined Python function called **drawRectangle** that accepts 3 parameters: a turtle object, a width, and a length, so that it may be called like this: **drawRectangle(Camilla, 150, 50)** or **drawRectangle(Jessie, 200, 300)**. Test it out to make sure it works.
3. (14 pts) Write a defined Python function called **evaluateNumbers** that accepts 3 parameters – a , b , and c – all of them integers, so that it may be called like this: **evaluateNumbers(3, 6, 5)**. This function should print out “Scenario A” if the integer a is equal to the modulo of the double of b with c , or it should print out “No Scenario” if that condition is not met. Test it out with different parameters and report on 2 incidents when the function printed out “Scenario A”.
4. (6 pts) What 2 lines of Python code will print out the decreasing numerical sequence: **21, 18, 15, ..., 3, 0**, where each number is printed on a separate line of output?