CS 150 Introduction to CS I
Python – Worksheet 02

Topics: Math and Random Modules

Directions: in Wing 101, write the solution to each question, labeling your solutions as shown in the sample run.

Review of some previous functions

1. Display 62.583 rounded to 2 decimals
2. Display 12345.6789 rounded to 3 decimals
3. Display 25^4 (25 to the power of 4)

Using the math module functions:

4. Display the square root of 144
5. Display 25 cubed
6. Display the next higher integer from 62.3
7. Display the next lower integer from 36.9
8. Display the value of pi
9. Show two ways to truncate a float value (145.975) to an int
    a. Using a math function
    b. Using a type conversion function

Using the random module funcctions:

10. Display 5 random values between 0 and 1 (excluding 1), rounded to 5 decimals.
11. Using randint(), display 10 random integers between 15 and 50 inclusive on one line separated by spaces
12. Using randrange(), display 10 random integers between 15 and 50 inclusive all on one line separated by spaces

    Define a list of even numbers for questions 13 - 15

        numbers = [2, 4, 6, 8, 10, 12, 14, 16, 18, 20]

13. Display a random number from the above list
14. With one statement, display 3 random numbers from the list
15. Print the contents of the list, shuffle the numbers in the list, and then print the new shuffled list

SAMPLE RUN (note: your random numbers for questions 10-15 will be different and your labels will not be in bold.)

Solutions for 1 - 3
62.58
12345.679
390625

Solutions for 4 - 9
12.0
15625.0
63
36
3.141592653589793
145
145

Solution for 10
0.82405
0.32071
0.44753
0.75062
0.29983

Solution for 11
36 38 17 28 19 22 19 23 17 34

Solution for 12
29 46 22 19 35 30 36 21 45 26

Solutions for 13 - 15
2
[8, 18, 6]
Original list: [2, 4, 6, 8, 10, 12, 14, 16, 18, 20]
Shuffled list: [14, 2, 18, 10, 6, 8, 12, 4, 20, 16]