Tutorial Sheet

Question 1 Write an application containing a list that stores 5 prices, such as €2.34, €7.89 etc. The application should:

a) Read in the 5 numbers from the user
b) Display the sum of all the prices
c) Calculate and display the average of all the prices
d) Display all prices less than €5.00
e) Display all prices that are higher than the calculated average

Question 2

What is the output of the following code?

```
letters = ["a", "b", "c"]
for i in range(len(letters)):
   print(letters[i] + ", ")
```

What is the output of the following code?

```
a = [1.1, 2.2, 3.3]
print(a[0], " ", a[1], " ", a[2])
a[1] = a[2]
print(a[0], " ", a[1], " ", a[2])
```

What is wrong with the following piece of code, given that you want to store the indeex * 3 at that index's position?

```
sample = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
for i in range(1, 11):
   sample[i] = 3*i
print(sample)
```

When corrected – what will the output be?

Question 3

Write an application that reads in 5 scores and shows how much each score differs from the highest score, Sample output below:

Enter 5 scores:
10
20
40
22
18
The highest score is 40
Score 1 : 10 differs from max by 30
Score 2 : 20 differs from max by 20
Score 3 : 40 differs from max by 0
Score 4 : 22 differs from max by 18
Score 5 : 18 differs from max by 22

Question 4

Use the code from the lecture notes for the lotto program, add to this to ensure that no random number are repeated in the list, and the any number a user enters is not repeated in the list. Sort the numbers before printing them.