Assignment - Python (Numpy)

1. Which of the following option(s) can add 1 to each element of array A?

A = np.array([2, 0, 1, 9, 1, 1, 1, 0, 3, 5])

    (Multiple answers may exist)
    a) **A+1**
    b) **list(map(lambda x:x+1, A))**
    c) **[x+1 for x in A]**
    d) **A+"1"**

2. Given an array, return the shape and dimension of the array.

3 a)Write the code using np.arange() to get all even numbers between 21 and 70, (70 inclusive)
3 b) Write the code using np.arange() to get all odd numbers between 20 and 71. (71 inclusive)

Which options correctly answer questions a and b (One or Multiple answers)

    (Multiple answers may exist)
    a) **For question 'a', the answer is np.arange(22,71,2)**
    b) **For question 'a', the answer is np.arange(21,70,2)**
    c) **For question 'b', the answer is np.arange(20, 72, 2)**
    d) **For question 'b', the answer is np.arange(21, 72, 2)**

4. Given the start, end, and the stepsize return a numpy array sequence in given range with the specified stepsize.

5. Which option is correct about the output of the following code snippet?

```
import numpy as np
x = np.array([-5, 9 , 20 , 25, -3, 5, 16, 10,-8])
x[(x >= -5) & (x <= 15)] *= -1
print(x)
```

    a) Given code will change the sign of all the numbers in x.
    b) Given code will change the sign of all the numbers in range [-5, 15] in x.
    c) Given code will change the sign of all the numbers greater than -5 in x.
    d) Given code will change the sign of all the numbers smaller than 15 in x.