Question 1

Part a

```
evenlistt = [2,4,6,8,10]
x = sum(evenlistt)
y = sum(evenlistt)/len(evenlistt)


print(f'Sum of the list is {x}')
```

```
Sum of the list is 30
```

```
print(f'Average of the list is {y}')
```

```
Average of the list is 6.0
```

Part b

```
P = 5000
r = 0.045
t = 6
CI = P*(1+r)**t
print(f'Compound Interest is {CI}')
```

```
Compound Interest is 6511.300624237576
```

Part c

```
import numpy as np
x=np.array([300,450,500,400,350])
y = 1.1*x
print(f'The updated array after multiplied by 1.1 is {y}')
```

```
The updated array after multiplied by 1.1 is [330. 495. 550. 440. 385.]
```

```
for i in x:
  1.1*i
  print('The value of the multiplied array is: ')
  print(i)
```

```
The value of the multiplied array is:
300
The value of the multiplied array is:
450
The value of the multiplied array is:
500
The value of the multiplied array is:
400
The value of the multiplied array is:
350
```

Part d

```
import pandas as pd
Countries = ['Pakistan','India','America','China','Iran']
Language = ['Urdu','Hindi','English','Chinese','Persian']
df = pd.DataFrame({'Countries':Countries,'Language':Language})
df.head(3)
```

	Countries	Language
0	Pakistan	Urdu
1	India	Hindi
2	America	English

Next steps: Generate code with df | View recommended plots | New interactive sheet

Question **2**

The number of trees being used in this model are 100 (estimators).

If we decrease the number of trees there will be fewer decision trees and it is possible that the accuracy of prediction falls because we have fewer trees that use fewer random features

The df shape command returns the shape of the data set in the form (rows , columns) as we can see below

```
df
```

	Countries	Language
0	Pakistan	Urdu
1	India	Hindi
2	America	English
3	China	Chinese
4	Iran	Persian

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```
df.shape
```

```
(5, 2)
```