

1-length

```
In [2]: import numpy as np
```

```
In [4]: l1=np.array([10,20,30,40,50])  
length=len(l1)  
print('length:',length)
```

length: 5

2-minimum

```
In [7]: min=np.min(l1)  
print('minimum:',min)
```

minimum: 10

3-maximum

```
In [14]: max=np.max(l1)  
print('maximum:',max)
```

maximum: 50

4-sum

```
In [17]: summ=np.sum(l1)  
print('sum:',summ)
```

sum: 150

5-count

```
In [26]: count=np.count_nonzero(l1>30)  
print('count of elements >30:',count)
```

count of elements >30: 2

6-mean

```
In [29]: mean=np.mean(l1)  
print('mean:',mean)
```

mean: 30.0

7-median

```
In [32]: median=np.median(l1)  
print('median:',median)
```

median: 30.0

9-variance

```
In [40]: variance = np.var(l1)
print("Variance:", variance)
```

Variance: 200.0

10-standard deviation

```
In [43]: std_dev = np.std(l1)
print("Standard Deviation:", std_dev)
```

Standard Deviation: 14.142135623730951

11-covariance

```
In [46]: x = np.array([1, 2, 3, 4, 5])
y = np.array([2, 4, 6, 8, 10])
cov_matrix = np.cov(x, y)
print("Covariance Matrix:\n", cov_matrix)
```

Covariance Matrix:

```
[[ 2.5  5. ]
 [ 5. 10. ]]
```

12-correlation

```
In [49]: corr_matrix = np.corrcoef(x, y)
print("Correlation Matrix:\n", corr_matrix)
```

Correlation Matrix:

```
[[1. 1.]
 [1. 1.]]
```

13-percentile

```
In [54]: p90 = np.percentile(l1, 90)
print("90th Percentile:", p90)
```

90th Percentile: 46.0

14-Quantile

```
In [57]: q75 = np.quantile(l1, 0.75)
print("75th Quantile (Q3):", q75)
```

75th Quantile (Q3): 40.0

```
In [ ]:
```