

In [18]:

```
import numpy
data = [15,45,78,65,32,45,46,31,21]
x = numpy.mean(data)
print(x)
```

42.0

In [19]:

```
dataset = sorted(data)
print(dataset)
y = numpy.median(dataset)
print(y)
```

[15, 21, 31, 32, 45, 45, 46, 65, 78]
45.0

In [21]:

```
from scipy import stats
z = stats.mode(dataset)
print(z)
```

ModeResult(mode=np.int64(45), count=np.int64(2))

In [23]:

```
import pandas as pd
df = pd.read_csv("Iris.csv")
df
```

Out [23]:

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species	
	0	1	5.1	3.5	1.4	0.2	Iris-setosa
	1	2	4.9	3.0	1.4	0.2	Iris-setosa
	2	3	4.7	3.2	1.3	0.2	Iris-setosa
	3	4	4.6	3.1	1.5	0.2	Iris-setosa
	4	5	5.0	3.6	1.4	0.2	Iris-setosa

	145	146	6.7	3.0	5.2	2.3	Iris-virginica
	146	147	6.3	2.5	5.0	1.9	Iris-virginica
	147	148	6.5	3.0	5.2	2.0	Iris-virginica
	148	149	6.2	3.4	5.4	2.3	Iris-virginica
	149	150	5.9	3.0	5.1	1.8	Iris-virginica

150 rows × 6 columns

In [24]:

```
df.describe()
```

Out [24]:

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
count	150.000000	150.000000	150.000000	150.000000	150.000000
mean	75.500000	5.843333	3.054000	3.758667	1.198667
std	43.445368	0.828066	0.433594	1.764420	0.763161
min	1.000000	4.300000	2.000000	1.000000	0.100000
25%	38.250000	5.100000	2.800000	1.600000	0.300000
50%	75.500000	5.800000	3.000000	4.350000	1.300000
75%	112.750000	6.400000	3.300000	5.100000	1.800000
max	150.000000	7.900000	4.400000	6.900000	2.500000

In [25]:

```
df.groupby("Species").describe()
```

Out [25]:

	Id	SepalLengthCm	...	PetalLengthCm		PetalWidthCm															
	count	mean	std	min	25%	50%	75%	max	count	mean	...	75%	max	count	mean	std	min	25%	50%	75%	max
Species																					
Iris-setosa	50.0	25.5	14.57738	1.0	13.25	25.5	37.75	50.0	50.0	5.006	...	1.575	1.9	50.0	0.244	0.107210	0.1	0.2	0.2	0.3	0.6
Iris-versicolor	50.0	75.5	14.57738	51.0	63.25	75.5	87.75	100.0	50.0	5.936	...	4.600	5.1	50.0	1.326	0.197753	1.0	1.2	1.3	1.5	1.8
Iris-virginica	50.0	125.5	14.57738	101.0	113.25	125.5	137.75	150.0	50.0	6.588	...	5.875	6.9	50.0	2.026	0.274650	1.4	1.8	2.0	2.3	2.5

3 rows × 40 columns

In []: