Mediana

In [2]:

```
total = 4 + 24 + 51 + 32 + 20 + 2; total
```

Out[2]:

```
133
```

In [12]:

```
meio = total/2
```

In [13]:

```
dif = meio - (4 + 24) #
```

In [14]:

```
11 + 5/51 * dif   # mediana
```

Out[14]:

```
14.774509803921568
```

Desvio Padrão

In [74]:

```
x = [4,4,4,5,5,5,5,8,10,10,13,13,13]
```

In [ ]:

```
np
```

In [75]:

```
np.std(x)
```

Out[75]:

```
3.5634568682770675
```

Regressão

In [19]:

```
import pandas as pd
import numpy as np
from sklearn.linear_model import LinearRegression as lr
```

In [66]:

```
x = pd.DataFrame([2,5,11,10,8,14,15,8,7,10,12,13])
y = pd.DataFrame([15,20,24,20,18,28,28,17,14,21,22,29])
```

In [50]:

```
LR = lr().fit(x, y)
```

In [70]:

```
LR.coef_   # coeficiente "a"
```

Out[70]:

```
array([[1.08174387]])
```

In [71]:

```
LR.intercept_   # coeficiente "b"
```

Out[71]:

```
array([11.15531335])
```

Previsão

In [55]:

```
LR.predict([[60]])  # y dado x
```

Out[55]:

```
array([[76.0599455]])
```

Correlação

In [68]:

```
table = pd.concat([x, y], 1)
```

In [69]:

```
table.corr()   # correlação entre x e y
```

Out[69]:

	0	0
0	1.000000	0.857143
0	0.857143	1.000000

In [ ]:

```

```