

In [1]:

```
x=[13,56,78,34]
y=[34,56,89,98]
import pandas as pd
df= pd.DataFrame({'X':x})
df['Y']=y
df
```

Out[1]:

	X	Y
0	13	34
1	56	56
2	78	89
3	34	98

In [2]:

```
import matplotlib.pyplot as plt
plt.plot(df['X'],df['Y'],'ro')
```

Out[2]:

[<matplotlib.lines.Line2D at 0x2cba2edb080>]

In [3]:

```
covxy=df.cov()
```

In [4]:

```
cxy=covxy['X']['Y']
vx=covxy['X']['X']
```

In [5]:

```
beta=cxy/vx
```

In [6]:

```
mx=df['X'].mean()
my=df['Y'].mean()
alpha=my-beta*mx
```

In [7]:

```
alpha,beta
```

Out[7]:

(43.927486994373076, 0.5596135470856779)

In []: