

In [28]: `import numpy as np`

```
X = np.random.rand(1,15)
m = 3
b = 2
Y = X*m + b
```

In [34]: `XY_bar = np.sum(X*Y)/X.shape[1]`
`Y_bar = np.sum(Y)/Y.shape[1]`
`X_bar = np.sum(X)/X.shape[1]`
`Xsquared_bar = np.sum(X**2)/X.shape[1]`

Calculations for finding m
`(XY_bar - (Y_bar*X_bar))/(Xsquared_bar - (X_bar*X_bar))`

Notice how the output is very close to our set slope

Out[34]: 3.0000000000000004

In [31]: *# Calculations for finding b*
`Y_bar - m*X_bar`

Notice how the output is very close to our set slope

Out[31]: 2.0

In [38]: *# Another calculations for finding b*
`Y_bar - ((XY_bar - (Y_bar*X_bar))/(Xsquared_bar - (X_bar*X_bar)) * X_bar)`
Notice how the output is very close to our set slope

Out[38]: 2.0