

- For our example:

Participant	Study Time (X)	Exam Score (Y)	Mean X	Mean Y	X - Mean X	Y - Mean Y	(X - Mean X) * (Y - Mean Y)
1	14	5	14.6	6.4	-0.6	-1.4	0.84
2	15	7	14.6	6.4	0.4	0.6	0.24
3	16	7	14.6	6.4	1.4	0.6	0.84
4	13	5	14.6	6.4	-1.6	-0.4	0.64
5	15	7	14.6	6.4	0.4	0.6	0.24

$\Sigma = 2.8$

$$\text{Cov}(x,y) = 2.8/N-1 = 2.8/4 = 0.7$$

- Now, one problem with covariance as we've calculated it is that the score we end up with depends on the measurement scales associated with our variables.
- In other words, the covariance value isn't standardised.
- We can divide any value by the standard deviation and that will give us the distance from the mean in standard deviation units....