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CCA Assignment - 2

Solve LR problem

No	Maths (X)	Stats (Y)	$(x-\bar{x})$	$(y-\bar{y})$	$(x-\bar{x})^2$	$(x-\bar{x})(y-\bar{y})$
1	95	85	17	8	289	136
2	85	95	7	18	49	126
3	80	70	2	-7	4	-14
4	70	65	-8	-12	64	96
5	60	70	-18	-7	324	126
					730	470

Mean : $\bar{X} = 78$ $\bar{Y} = 77$

Let the L.R equation ~~by~~ be given by $y = mx + c$

$$\therefore m = \frac{\Sigma (x-\bar{x})(y-\bar{y})}{\Sigma (x-\bar{x})^2} = \frac{470}{730} = 0.6438$$

$$m = 0.6438$$

$$y = mx + c$$
$$77 = (0.6438)(78) + c$$
$$\therefore c = 26.7836$$

Now If Maths marks = 80

$$y = mx + c$$
$$= (0.6438)(80) + 26.7836$$
$$= 78.2876$$

$\therefore$ Stats marks = 78.28