

ASSIGNMENT

1. What is regression?
2. Explain least square principle.
3. Fit a regression equation of y on x .
4. Define regression coefficient. Give properties of regression coefficients.
5. Give properties of regression lines.
6. A super mall would like to estimate the relationship between sales and number of sections. The following data have been collected.

Sales (units)	33	38	24	61	52	45	65	82	29	63	50	79
No. of sections	3	7	6	6	10	12	12	13	12	13	14	15

1. Develop the estimating equation that fits the data
2. Estimate the sales when the number of sections is of 5 units
3. Calculate the sample correlation coefficients.

[Ans: 1. $\hat{y} = 21.83 + 2.92x$ 2. $\hat{y} = 42.27 \approx 42$ units 3. $r = 0.59$]

7. The relationship between stock's average return (y) and overall market return (x) is known to be linear. Find the linear relationship. Obtain the standard error of estimate.

$x(\%)$	11	15	3	18	10	12	6	7	18	13
$y(\%)$	10	12	8	15	9	11	8	10	13	11

$[\hat{y} = 6.07 + 0.41x, s_e = 0.8950]$