

Exercise for You:

Q1: What Is Multiple Linear Regression (MLR)?

Q2: How to Use Multiple Linear Regression explain with proper example?

Q3: What are the Difference Between Linear Vs Polynomial Vs Multiple Regression?

Q4: Why would one use a multiple regression over a simple OLS regression?

Q5: Consider the following set of points: $\{(-2, -1), (1, 1), (3, 2)\}$

a) Find the least square regression line for the given data points.

b) Plot the given points and the regression line in the same rectangular system of axes.

Q6: a) Find the least square regression line for the following set of data

$\{(-1, 0), (0, 2), (1, 4), (2, 5)\}$

b) Plot the given points and the regression line in the same rectangular system of axes.

Q7: The values of x and their corresponding values of y are shown in the table below

x	0	1	2	3	4
y	2	3	5	4	6

a) Find the least square regression line $y = a x + b$.

b) Estimate the value of y when $x = 10$.

Q8: The sales of a company (in million dollars) for each year are shown in the table below.

x (year)	2005	2006	2007	2008	2009
y (sales)	12	19	29	37	45

a) Find the least square regression line $y = a x + b$.

b) Use the least squares regression line as a model to estimate the sales of the company in 2012.