5° REGRESSION –

In a functional relationship, if we know the value of one variable (the independent variable), the value of the other variable (the dependent variable) can be determined exactly. In a statistical relationship, the situation is slightly different We cannot ~~one~~ exactly determine the value of one variable from that of the other. We can make an estimate of the value of one variable when that of the other is known. Regression analysis is concerned with the method of making such estimates. It attempts to lay down rules for predicting the value of one variable from that of the other.

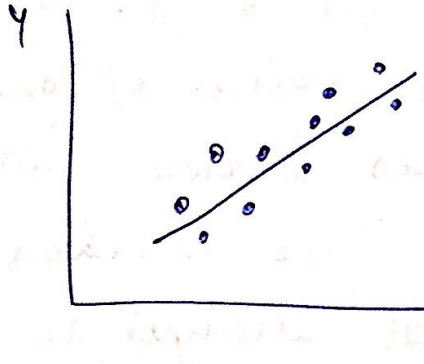
The statistical method which helps us to estimate or predict the value of one variable from the known variable is called regression.

If X & Y are 2 quantitative variables, then we shall have 2 regression lines — the regression of X on Y & the regression of Y on X. The regression line of Y on X gives the most probable values of Y for the given values of X and the regression line of X on Y gives the most probable

values of X for given values of Y.

Line of Best fit —

If the 2 variables X & Y are correlated, then the dots of the scatter diagram will be concentrated around a line, called the line of best fit or the line of regression.




line of best fit.