

Regression & Best Fitting Line:

Driver Test

Trial 1	Trial2
X	Y
3	21
6	25
2	20
6	33
5	23
8	34

Regression Coefficients :

- 1) b = slope of the regression line ; the amount of variation in the dependent variable (y) which occurs with each unit change in the independent variable (x).
- 2) a = intercept, where the best fitting line crosses the y axis ($x=0$).

$\hat{Y} = a + bX$ *best fitting line*- allows you to make a prediction for "y" for any x score.

How calculate:

$$b = r * \frac{S_y}{S_x} \quad (\text{it matters what is on top}) \quad a = \bar{Y} - b\bar{X}$$

If trail 1 = 9 what is best guess? How about 5?

How good a guess would we expect this to be?