

Simple Linear Regression

Excel function in English

Excel Function in Portuguese

Number of Employees	Average Number of Tickets
51	1
68	9
67	20
124	1
124	8
134	30
157	20
190	8
205	20
230	50
265	35
296	65
336	35
359	60
403	85
418	40
437	75
451	85
465	65
491	95

Using Google Sheets, or Microsoft Excel, calculate:

- the slope of the line resulting from linear regression of the dataset.

Slope (m) Inclinação = SLOPE (data_y, data_x) =INCLINAÇÃO(B2:B21;A2:A21) 0,18174

- y-value at which the line resulting from linear regression of the dataset will intersect the y-axis (x=0).

Intercept (b) Intercepção = INTERCEPT(data_y, data_x) =INTERCEPÇÃO(B2:B21;A2:A21) -7,54648

- y-value at which the line resulting from linear regression of the dataset will intersect the y-axis (x=0).

Correlation Correlação = CORREL(data_y, data_x) =CORREL(B2:B21;A2:A21) 0,88668

- R-squared - the coefficient of determination

r-squared = RQUAD(data_y, data_x) = RQUAD(B2:B21;A2:A21) 0,78621 strong model

- Using the regression results, how many tickets per week could we expect from a new client with 525 employees?

$y = m \cdot x + b$

$y = \text{average number of tickets} ; x = \text{number of employees}$

$y = 0,18174 \cdot x - 7,54648$

$y = 0,18174 \cdot 525 - 7,54648 \cong 88$