

Doing a linear regression in Excel 2007 (fitting $y=mx+b$ to data)

Enter data in adjacent columns (x,y)

Graph data

Select an empty cell (in a region where there are at least 5 empty lines below and 1 empty column to the right)

Click on f_x in the function toolbar

Select the LINEST function

Follow the directions:

select the y data,

select the x data,

enter FALSE if you want to fix $b=0$; otherwise, enter TRUE

enter TRUE (to return statistics on the fit)

Click OK

Click on the cell with the LINEST function, and drag to select one more column to the right and four more rows down

Hit the F2 key; then hit Ctrl+Shift+Enter

The array that's returned looks like this (values in bold are what you're interested in now)

m	b
Error in m	Error in b
R²	Error for y estimate
F statistic	# degrees of freedom
Regression sum of squares	Residual sum of squares

Now you can make a new column to the right of your data column to calculate the best-fit line, $y=mx+b$, using the m and b values in the LINEST array. You can add this line to the graph by selecting the chart, then selecting the Design tab, choosing Select Data, then Legend Entries (Series) Add, and following the directions.