

Bivariate data on a 2D page



Using POINT MODE, enter a small number of points roughly in a linear relationship.

Use CTRL-A to select them all, and then right-click: - "Hide labels"

- "Convert to data set" (make them a single object)

- Point -> "Mean" to show the mean, then text box.



Select the dataset (click on any one point): - Line -> "y-on-x Regression line"

(Extrapolation extremes are on a dashed line)

CTRL-click (or click, hold and drag) on a single point. Move it: regression line always includes the mean.

Double-click on a data point to open "Edit Data Set"



Tick "Show Statistics", untick "perform autoscale":

| Statistics Results - [Data Set 1] | ? | × |
|------------------------------------------|---|---|
| Number of points, n: 5 | | |
| Mean, x: 3.64 | | |
| Mean, y: 3.66 | | |
| Standard Deviation, x: 2.228 | | |
| Standard Deviation, y: 1.922 | | |
| Correlation Coeff, r: -0.9264 | | |
| Spearman's Ranking Coeff: -1 | | |
| y-on-x Regression Line: y=-0.7993x+6.569 | • | |
| x-on-y Regression Line: x=-1.074y+7.569 | | |
| Transfer to Results Box | | |

If you HIDE the regression line, draw the line y = 1, and put on a new point 'A' on this line. Now select 'A' and "Edit Draw Options" to enhance its style.

Select 'A' and the mean to draw a straight line.



Select the new line and one point on the dataset: -> "Line" -> "y-on-x-residuals" Select one of the squares and show the text hoy:

Select one of the squares and show the text box:



Select 'A' and one of the squares: create a new "XY" point 'B' from these attributes. Move 'A' on y = 1. Note where 'B' minimises. Select 'A' and 'B' and "Create" -> "Locus". A great way to illustrate the principle of least squares regression!