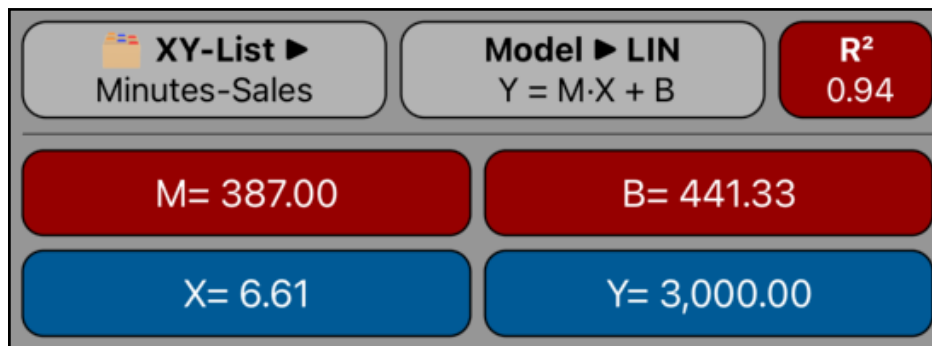



(X,Y) List Curve Fitting Worksheet



This worksheet allows you to perform curve-fitting regressions and forecasting over a previously created “(X,Y) List” (see the “(X,Y) List Editor” help document).

[ List ▶]	Select the previously created “(X,Y) List” to use in the calculations.
[Model ▶ ...]	Select the best regression from available models or pick one from the list (Linear, Logarithmic, Exponential, Power, Exponent or Inverse).
[M]	Calculates the ‘M’ coefficient for the selected model equation.
[B]	Calculates the ‘B’ coefficient for the selected model equation.
[R ²]	Calculates correlation coefficient for the selected model.
[X]	Stores the “X” value or calculates it for a given “Y” value using the current model equation.
[Y]	Stores the “Y” value or calculates it for a given “X” value using the current model equation.
If any other key is pressed before one of the Blue keys, the displayed number is stored in the corresponding variable. Otherwise, the variable is calculated.	

Example:

Using the “Minutes-Sales” List created in the “(X,Y) List Statistics” worksheet example, which has the following data:

Week	Minutes	Sales
1	2	1,400
2	1	920
3	3	1,100
4	5	2,265
5	6	2,890
6	4	2,200

- 1) What regression model best fits the data and with the best model:
- 2) Calculate the estimated Sales for 8 minutes advertising?
- 3) Calculate the estimated Minutes for 3,000 of sales?

Solution : (Assuming the “Minutes-Sales” list already exist and is selected)

Keystrokes	Description
[Model ►] Linear [R ²]	Select the Linear regression model and calculates the correlation coefficient. R² = 0.94
[Model ►] Logarithmic [R ²]	Select the Logarithmic regression model and calculates the correlation coefficient. R² = 0.87
[Model ►] Exponential [R ²]	Select the Exponential regression model and calculates the correlation coefficient. R² = 0.93
[Model ►] Power [R ²]	Select the Power regression model and calculates the correlation coefficient. R² = 0.89
[Model ►] Exponent [R ²]	Select the Linear regression model and calculates the correlation coefficient. R² = 0.93
[Model ►] Inverse [R ²]	Select the Linear regression model and calculates the correlation coefficient. R² = 0.77
<p>1) The best model is the Linear because it has the R² coefficient closest to 1. Sales = 387.00 * Minutes + 441.33 NOTE: The same result will be obtained quickly using the [Model ►] Best Fit option.</p>	
8 [X] [Y]	2) For 8 minutes of advertising, the estimated sales = 3,537.33
3000 [Y] [X]	3) For 3,000 of sales you should contract 6.61 minutes.