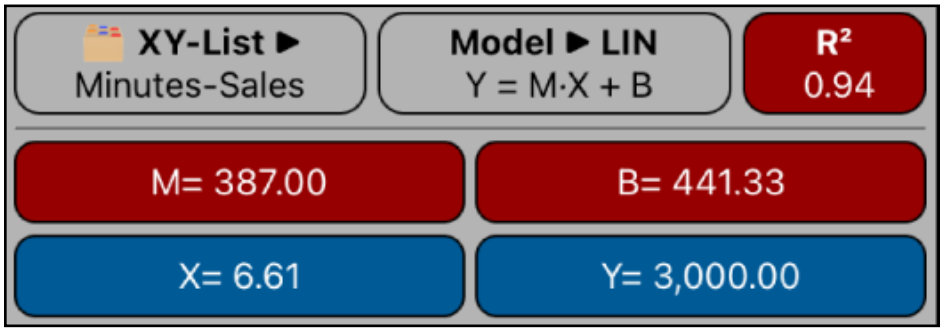
(X,Y) List Curve Fitting Worksheet



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**
1) The best model is the Linear because it has the R^2 coefficient closest to 1. **Sales = 387.00 * Minutes + 441.33** **NOTE:** The same result will be obtained quickly using the **[Model ▶]** Best Fit option.	
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.