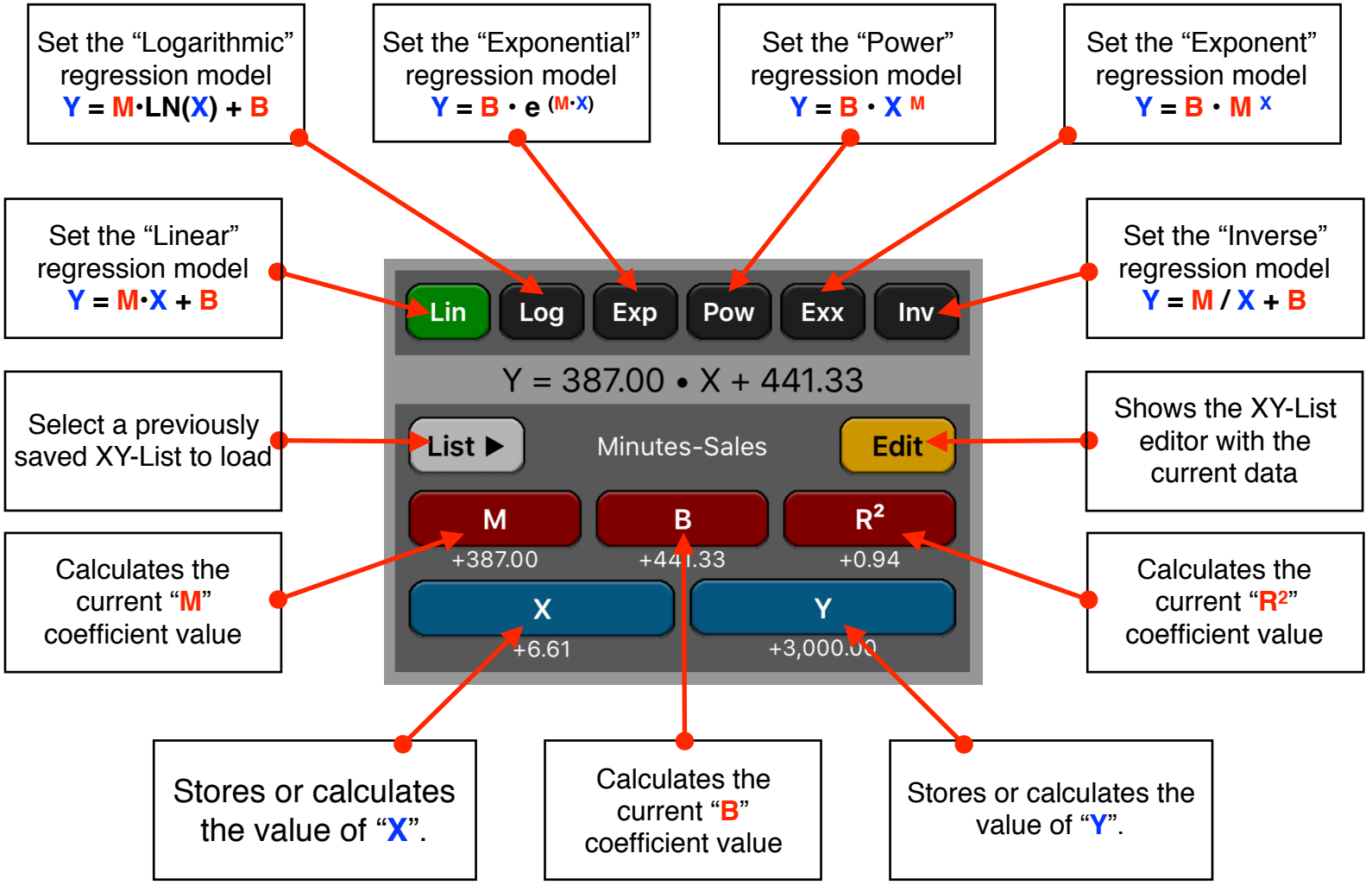
Curve Fitting Tool

To show it, press the **OPT** key, touch the "**Scientific**" or "**Statistics**" menu button, and then select the "**Curve Fitting**" option.

This tool allows you to perform statistical regressions and forecasting using a previously created two variables statistic list (XY-list). The "XY-list" to use is chosen through the **[List ▶]** button.

To create a "XY-list", open the "**X,Y Data Editor**" directly touching the **[Edit]** button.



Example:

For the list “Minutes-Sales” created in the “**X,Y Data Editor**” example:
What is the best regression model and equation that best fits the data?;
What is the estimated sales for a 8 minutes of advertising in the best model?;
How many minutes of advertising are estimated to obtain $3,000.0 sales?.

Solution :

Keystrokes	Description
[List ▶]	Select the just created “Minutes-Sales” list
[Lin] [R^2]	Select the Linear model and calculate R^2. **Result = 0.9365**
[Log] [R^2]	Select the Logarithmic model and calculate R^2. **Result = 0.8733**
[Exp] [R^2]	Select the Exponential model and calculate R^2. **Result = 0.9257**
[Pow] [R^2]	Select the Power model and calculate R^2. **Result = 0.8921**
[Exx] [R^2]	Select the Exponent model and calculate R^2. **Result = 0.9257**
[Inv] [R^2]	Select the Inverse model and calculate R^2. **Result = -0.7665**

The best regression model is “**Linear**” because it has the correlation coefficient (R^2) closest to 1, so the equation is:

Keystrokes	Description
[Lin]	Select the Linear model.
[M]	Linear regression slope. **Result = 387.00**
[B]	Linear regression Y-intercept. **Result = 441.33**
Equation: Y = 387 • X + 441.33	

Now, calculate the estimated values for “Minutes” and “Sales”:

Keystrokes	Description
Type “8” [X]	Enters the X-value for Minutes.
[Y]	Calculates the estimated Sales. **Result = $3,537.33**
Type “3000” [Y]	Enters the X-value for Sales.
[X]	Calculates the estimated Minutes. **Result = 6.61** (minutes)