

# Curve Fitting with Excel

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1. **Data** There must be two columns of data. One column of “x” (input, predictor, independent) data, and one column of “y” (output, response, dependent) data. The size of both data sets must be the same.

## 2. Scatter Plot

- Highlight the input  $x$  and output  $y$  data by holding the left mouse button down. If the  $x$  and  $y$  data columns are not adjacent then highlight the  $x$  data while holding down the control key, lift your finger off the left button after the  $x$  data is highlighted and then highlight the  $y$  data. Excel assumes that the left column is  $x$  and the right column is  $y$ . Just highlight the data and not the column headers.
- Got to Insert and under Charts select a scatter plot.
- Clicking on the chart also selects chart design on the top bar (if not select it). You can click Quick Layout to allow for labelling of axis.
- To change the axis range, click on the axis. A dialog box appears on the right where the axis range can be set.

## 3. Fitting a model

- Click the chart.
- On the right side of the chart some icons appear. Click the plus. Go to trendline. Click the > and go to more options.
- A right side bar appears where trendline options can be selected. At the bottom you can select to display the equation and R-squared.
- The trendline can be extrapolated forward or backward by setting the range under forecast, which is just about Display Equation. This will also change the axis range.
- To change the decimal places in the model click the down arrow next to Trendline Options along the top. Choose the appropriate trendline. If this is the first trendline it will be called Series 1 Trendline 1 Equation. Click the histogram icon. Click Category and select Number. Below this is a box for Decimal places.

4. **Making Changes** Once the right dialog box is closed you get it back by clicking elements on the chart (axis, equation, etc.). The box will open to settings for the element clicked. The dialog box is changed by clicking the down arrow just about the icons along the top. A menu comes up and you can select the element of the graph or equation to change.