

Using function tables (Tutorial B2)

http://www.atomiclearning.com/k12/en/movie/86404/play_window?type=Tutorial&sid=2421

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You can evaluate graphed functions in a table using the Function Table feature. First, let's graph a couple of

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functions. I'll insert the Graphs application into a new page by clicking Insert, and then choosing Graphs. For

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my first function, in the entry line at the bottom of the work area, I'll type "x" and then press Enter to graph

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the function "f1(x)=x." I'll press Tab to reveal the Entry Line. Notice the entry line changes to allow me to graph

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a second function, so I'll graph the expression "x^2+6, by typing "x," then "Shift-6," followed by "2," then the

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right arrow key to move out of the exponent, followed by "+6", and then I'll press Enter to plot the function. Now

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I'll create a Function Table based on these functions by clicking Table in the Document Tools, and choosing Split-

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screen Table. This will bring up a split screen view, with my original application on the left, and my Function Table

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on the right. By default, the expressions are evaluated when x starts at 0, and moves in single integer steps up

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and down. I can move up and down in the list by pressing the up and down arrows on the keyboard. I can see that

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each of my functions are in their respective columns, so the first column shows me values for the expression

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$f_1(x) = x$,” and the second column shows values for the expression $f_2(x) = x^2 + 6$.” I’ll move back to the Graphs application

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by clicking on it, and then I’ll move my pointer to the line created by the first function. When the line is highlighted,

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I’ll click and drag to move the line around the graph. Notice that the function changes, the values in the Function Table

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change as well. I can also redefine the function in the table. I’ll double-click in the cell of the function table

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that currently says “ $x^2 + 6$,” and I’ll change the “+” to a “-” so that the equation is “ $x^2 - 6$.” Now, I’ll press

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Enter, and the graph and data change immediately. If I want to change the preferences for the Function Table, I

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can click on Table in the Document Tools and choose “Edit Table Settings.” Here, I can choose the starting value

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for the table as well as the steps between each number, so if I want the first value to be 5, and then the steps

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to go up or down by three, I can type “5” in the Table Start field, and then “3” in the Table Step field, and

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then click OK. Notice my first value is now 5, the second is 8, and so on. I’ll open the preferences again by clicking

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Table and choosing “Edit Table Settings,” again, and this time I’m going to do something different. I want the table

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to wait for me to enter a value for the independent variable x ” before evaluating it. To do this, just click the drop-

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down menu for Independent, and then select the Ask option. Then I’ll click OK. Now, I can type a value for x and press

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Enter, and the Function table will evaluate it.

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