

Using function tables (Tutorial C4)

http://www.atomiclearning.com/k12/en/movie/27960/play_window?type=Tutorial&sid=1670

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

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press the Home key, and choose New Document. If you have a document opened with unsaved changes, you'll be prompted to save before

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you continue. Now, select Graphs and Geometry. For my first function, in the entry line at the bottom of the work area, I'll type "x"

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and then press Enter to graph the function "f1(x)=x." Notice the entry line changes to allow me to graph a second function,

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so I'll graph the expression "x^2+6," by pressing "x," the "x^2" key, and then "+6", and then I'll press Enter to plot the function.

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Now I'll create a Function Table based on these functions by pressing the Menu key, and then choosing View, followed by Add Function

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

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default, the expressions are evaluated when x starts at 0, and moves in single integer steps up and down. I can move up and down

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in the list by pressing the up and down arrows on the NavPad. If I press the right arrow key on the NavPad once, I can see that

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each of my functions are in their respective columns, so the first column shows values for the expression "f1(x)=x," and the second

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column shows values for the expression “ $f_2(x)=x^2+6$.” I’ll move back to the Graphs & Geometry application by pressing Ctrl and

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then Tab. To move out of the entry line, I’ll press Esc, and then I’ll use the NavPad arrows to move my pointer to the line created

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by the first function. When the line is flashing, I’ll grab it by pressing and holding the Click key in the middle of the NavPad,

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and then I’ll use the arrow keys to drag the line around the graph. Notice that as the function changes, the values in the Function

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Table change as well. To release the line, I’ll press the Click key again. I can also redefine the function in the table. I’ll

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press Ctrl and then Tab to move back over to the Function Table, and then I’ll press Tab again to move from the x values to the

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header section, and then I’ll press Enter to highlight $f_1(x)$. Now, I can use the arrow keys in the NavPad to highlight the function

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definition cell. If I want the second function to be x^2-6 instead of the existing function, I can just type the new function here

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and then press 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 press the Menu key, then choose Function Table, and then select Edit Function Table Settings. Here, I can choose the starting

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value 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 to go up

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or down by 3, I can type “5” in the Table Start field, and then “3” in the Table Step field. Then use the Tab key to highlight

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OK” followed by Enter. Notice my first value is now 5, the second is 8, and so on. I’ll open the preferences again by pressing

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Menu, then going to Function Table, Edit Function Table Settings again, and this time I’m going to do something different. I want

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the table to wait for me to enter a value for the independent variable “x” before evaluating it. To do this, I’ll just use the

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Tab key to move to the drop-down menu for Independent, and then I’ll use the arrows on the NavPad to move down to the Ask option,

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and then press Enter. Now, I’ll use the Tab key again highlight OK” and then press Enter. 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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