

## Tracing a graph (Tutorial B3)

[http://www.atomiclearning.com/k12/en/movie/85847/play\\_window?type=Tutorial&sid=2410](http://www.atomiclearning.com/k12/en/movie/85847/play_window?type=Tutorial&sid=2410)

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You can trace a graph and see values for the curve, as well as find points of interest such as the minimum, maximum,

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zeroes, and intersections. CAS users can even find inflection points. I'll create a new page by pressing the Home key,

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and then choosing the Graphs icon. You can make menu selections either by pressing the corresponding number or using the

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Touchpad and Click key. I'll enter my function,  $x^2 + 6$ , and then press the Enter key to graph my parabola. To trace

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the graph, I'll press the Menu key and select Trace, followed by Graph Trace. Now I can press the right and left arrow

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keys on the Touchpad to move my trace cursor around the graph. If I press a number on the keypad, such as 2, you

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can see a text box appear with the number 2 in it. If I press Enter, I'll jump to the location on the curve where

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$x=2$ . To find points of interest on this curve, I'll press the Menu key, and then choose Analyze Graph. This will

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reveal a list of the available points for your handheld. For example, let's say I want to find the minimum value

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of this curve. I want the minimum value, so I'll choose Minimum. Now I'll use the Touchpad to roll over the graph

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of my curve. I need to give it a general area in which to search for the minimum value, so I'll use the Touchpad

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to roll to the left of where I can see the local minimum, and place the cursor on the curve. I'll press the Click

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key to set that point. Now, using the Touchpad, I can move to the right; notice I'm dragging a gray highlight area.

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I want that area to contain the minimum value, so I'll drag the range until I'm sure the minimum is contained

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within it, and then press the Enter key. Notice I can see a label that says "minimum" and the coordinates for the

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minimum value, (0,6), are shown. You can also trace more than one curve at a time. I'll graph a second function

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by pressing Esc, then Tab to reveal the Entry Line. I'll press "x" followed by the Enter key. Now I'll press Menu,

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then Trace, and then Trace All. I'll get a view that traces all functions at the current x value.

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