TI-Nspire™ Handheld Script

Graphing lines and conic sections using templates (Tutorial B10)

http://www.atomiclearning.com/k12/en/movie/92860/play_window?type=Tutorial&sid=2410

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Equations for lines and conics can now be entered quickly
and easily using templates. To see the templates for graphing

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linear functions, insert the Graphs application. Now press
menu and select Graph Entry/Edit, Equation, Line. The templates

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include slope-intercept, vertical lines, and the standard
form of a linear function ax+by=c. Select any of these

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options and the template will be pasted into the Graph
Entry line. You can input values for any of the coefficients

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of the equation. I'll use the standard form, and enter
3x+4y=10, so I'll press 3, then the tab button or the arrow

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button to move to the next field, and then press 4. I'll
press tab again to jump to the last field, and then enter

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10. Now I can press enter to see the graph. All three line
forms can be grabbed and dragged to explore the effects

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on the graph and its algebraic representation. You can
also use the templates to quickly enter functions for conic

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sections. I'll press menu, and then Graph Entry/Edit, Equation,
and then choose the conic section I'd like to graph. In

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this case, I'll graph an ellipse by choosing Ellipse. Now
I can enter my x and y values, and my major and minor axis

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values. Note that templates require something to be entered
in each of the fields, so if I want the y-intercept to

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be zero and just have y^2, I still have to enter (y-0)^2
rather than just skip the field and leave it blank. Once

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I've filled in my function, I'll press enter to graph it.
As with the line we graphed, if you want to perform a translation

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of this ellipse and see its effects, you can roll over
the graph, press and hold the Click button to grab it, and

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then move it to see the effects. Once you've graphed conic
sections, you have several tools you can use to explore

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features specific to conics. I'd like to find the foci
of my ellipse, so I'll press menu, and then choose Analyze

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Graph, Analyze Conics. You can see many different attributes
of conic sections that can be found here. I'll choose Foci.

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Now I can roll over my ellipse to see the foci appear. If
I want to have them stay on the graph while I explore it

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in different ways, I can click once to keep the foci plotted.

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