TI-Nspire™ Software Script

Linking variables in Graphs & Geometry (Tutorial B6)

http://www.atomiclearning.com/k12/en/movie/86408/play_window?type=Tutorial&sid=2421

[00:00:00.00]
You can link variables across multiple applications and
views. To demonstrate this, I'll create a new page by clicking

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Insert, and then choosing Geometry. I'll construct my circle
by clicking Shapes in the Document Tools, and then Circle.

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Now I'll place the point of my pencil where I'd like the
center of my circle to be, and then click. Then I'll move

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away from the center until I get the desired radius, and
then click again. To measure the radius, I'll click on

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Measurement, and then Length, and then I'll roll over the
center of the circle and click. Next, I'll roll over any

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point on the circumference of the circle and click again.
To store that radius as a variable, I'll roll my cursor

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over the radius, and then right click. I'll choose Store,
and call the variable "R" by pressing R on the keyboard

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followed by Enter. Now I'll measure the area of the circle
by clicking on Measurement and this time choosing Area.

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Again, I'll roll over the circumference of the circle and
click to reveal the area. I'll roll over that area, right

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click, choose Store, and this time I'll call this Area
by typing "A-R-E-A", and then pressing Enter. Now let's

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look at the relationship of the radius and the area graphically.
I'll click Page Layout, and choose Layout2. If you need

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to reposition the circle we drew, just click in the empty
area of a graph and drag it around until you see the circle.

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I'll click in the right work area and select Graphs. I'll
create a point by clicking Geometry in the Document Tools,

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then Points and Lines, and then choosing Point. I'll place
my cursor in the upper right quadrant and click to create

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the point. I'll reveal the coordinates for that point by
clicking Actions and choosing Coordinates and Equations.

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Next, I'll roll over the point and click to place the coordinates
in the graph. I'll reposition this graph just like I did

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with the other one, clicking in an empty area on the graph
and then drag it around until you see the positive areas

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of both Y and X, and you can see the coordinates for your
point. Now, I'll roll my cursor over the X value for my

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point and right click. I'll choose Variables, Link To, and
then select the variable I created "R". Now I've linked

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the two variables;if I change one it also changes the other.
I'll do the same with my Y value by rolling over it. Then

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right clicking. Then selecting Variables, Link To, followed
by the variable I created called "Area". Now, I'll go back

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to my circle, and rollover the circumference. I'll resize
this circle by clicking and dragging. Notice that as the

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radius decreases, the area also decreases and my point
in the right graph moves closer to the point .00. When

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I make the radius larger, the area also gets larger and
the point moves up and to the right.

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