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nspire me

Texas Instruments has just come out with a brand new calculator; the TI-nspire which has greatly improved the hardware compared to older TI graphing calculators. The TI-nspire combines interactive graphing capabilities and innovative computer features into one convenient place and can be used for Algebra 1 & 2, Geometry, Pre-Calculus, Statistics, Chemistry plus more. This calculator is compatible with other TI models and permitted for use on all the exams that the TI-84 can be used on.

Also, the TI-nspire comes with an interchangeable TI-84 Plus keypad that provides the same keystrokes as the TI-83 Plus and the TI-84 Plus Silver Edition graphing calculators. When you insert the TI-84 keypad into the nspire it acts as a regular TI-84, with the same functions and all the same programs. The keys on the TI-84 which contain two or three functions per key have been replaced by an innovative new diamond-like design that places letters and other less-used functions between the primary keys.

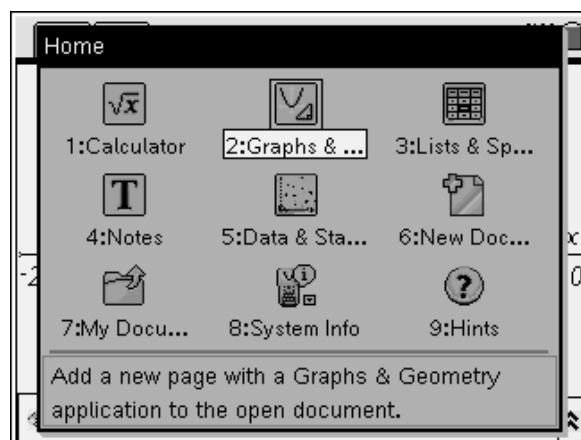
With the TI-nspire keyboard you can show multiple representations of the same material simultaneously. For example, you can have a chart, a graph, and the algebra for the graph all on the same screen. This makes it easier for students to keep track of all their work while trying to solve a particular problem.

The TI-nspire, gives us the ability to draw geometric shapes. Let's draw a circle, then draw in the radius for that circle, and finally find the length of that radius.

NOTE: The circle at the top of the calculator acts a mouse.

**** First we are going to put our TI-nspire in GRAPH mode ****

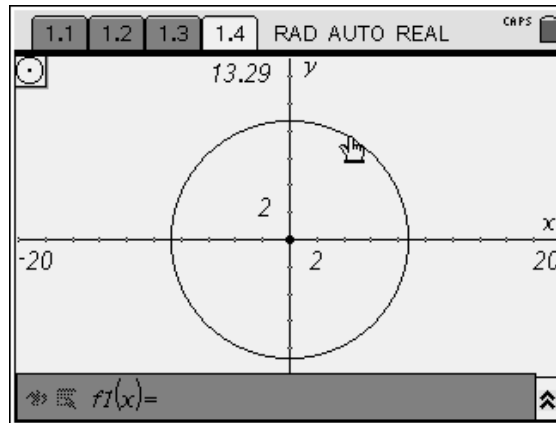
1. Press the HOME button and then hit 2 (Graph & Geometry)



**** Now we're going to create a circle by selecting the center point ****

2. Press the MENU button and then go to 8 (Shapes), then 1 (Circle).

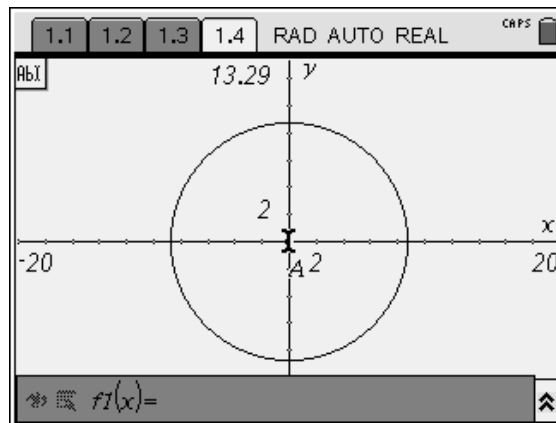
3. Next we need to move the cursor to where you want your circle, then hit ENTER to set the center of the circle. In order to dilate the circle, we just press any arrow key on the circle button at the top of the calculator. Now press ENTER to set the circle to the size you want.



**** Let's label the circle now ****

4. Place cursor on the center of the circle so that the grab hand appears.

5. Press MENU, then 1(Tools) and then 5(Text). We next want to hit ENTER and then ENTER again (if you wish to have a different letter, then hit ENTER, type in the desired letter and then press ENTER again)

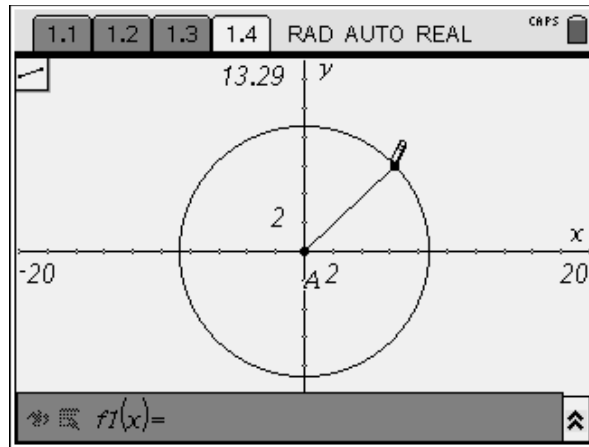


**** Next we're going to construct the radius of our circle ****

6. First we will press MENU, then 6 (Points & Lines) and then 5 (Segment).

7. Place the pen on center of the circle until the grab hand appears. Now press ENTER to select center of circle.

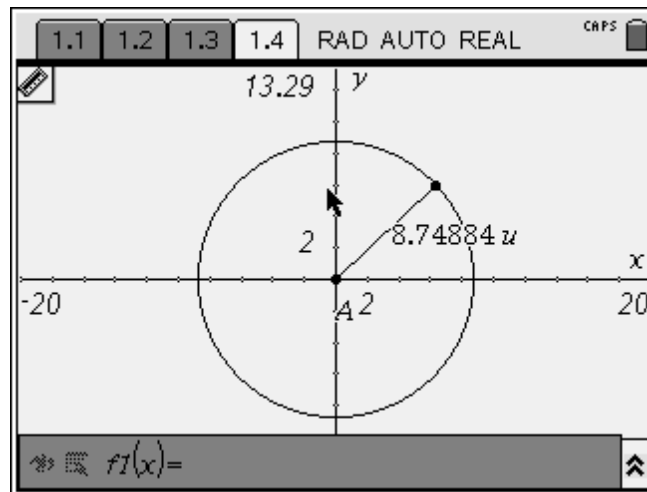
8. Pull the line out to the circle until the circle flashes a dotted line (once the circle flashes you know you are on the circle) and press ENTER.



**** Let's find the length of the radius now ****

9. Press MENU, then 7 (Measurement), and then 1 (Length)

10. Move cursor to some point on the radius and press ENTER to select the radius then press ENTER again to get the length.



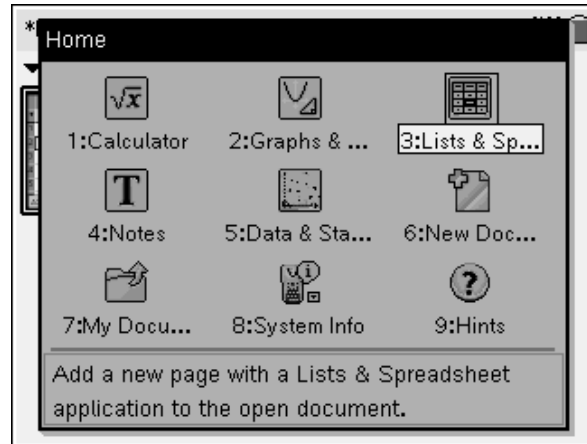
**** Now to get out of this... ****

11. Press CONTROL, then an arrow key on the circle button and then CLEAR.

The TI nspire has a new data function as well. The spreadsheet acts similarly to computer spreadsheet programs such as Microsoft Excel. Using the spreadsheet, a student can create box plots, scatter plots, use regression to fit real world data, and it also contains numerous statistical operations.

Let's insert real life data and create a box plot.
First let's access the data spreadsheet application

1. Press the home screen button
2. Select the 3 (Lists and Spreadsheet) application



Now that we are in the spreadsheet application, we can enter our data. For this exercise, we will use a sample set of test scores.

3. Move the highlighted box to the first square, A1.
4. Enter the data in the A and B columns.
5. Scroll up until you highlight the box next to the A. We must name the column before we can proceed. Name the column using the green letter keys and press ENTER.
6. Now select the columns by scrolling to the very top of the A column and pushing the up arrow. This will highlight the A column. Next, press CAPS once and press the right arrow key. This will highlight both columns.

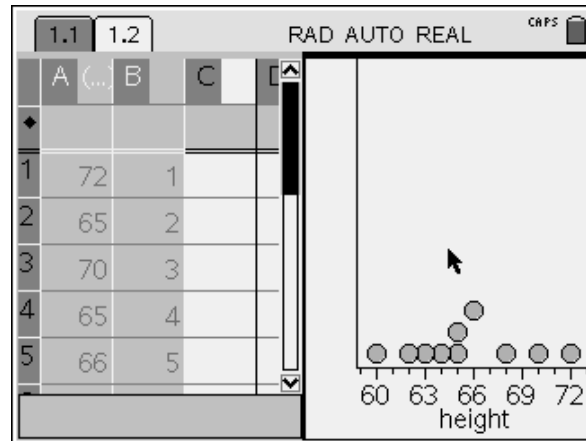
The screenshot shows the TI-84 Plus spreadsheet application. The title bar displays '1.1 1.2 RAD AUTO REAL CAPS'. The grid has columns labeled A through H and rows labeled 1 through 5. The data entered is as follows:

	A	B	C	D	E	F	G	H
1	72	1						
2	65	2						
3	70	3						
4	65	4						
5	66	5						

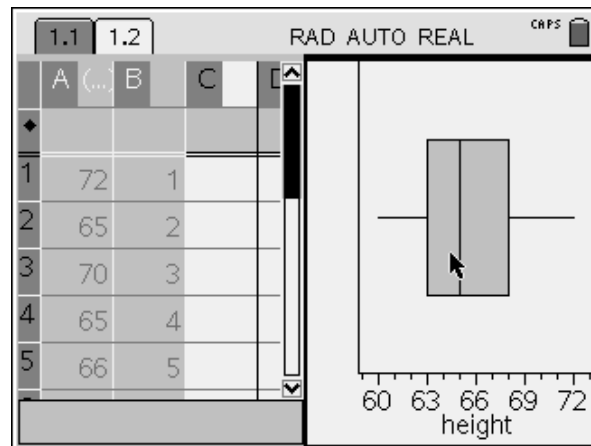
Now we can create the box plot.

8. Press the MENU key. Scroll down to 3 (Data) press enter and scroll down to 4 (Quick Graph). Press ENTER.

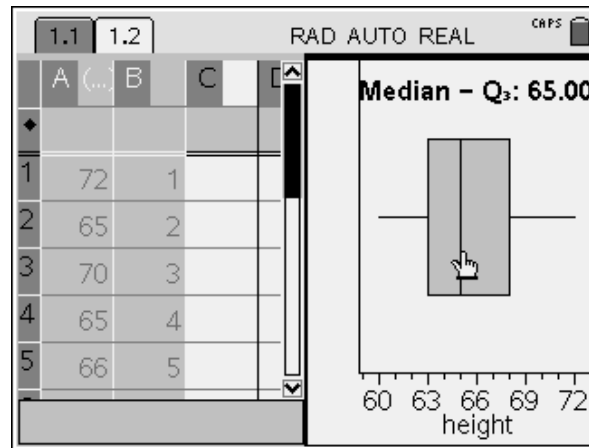
9. This will create a plot of the data points. Tab over to the quick graph by pressing CONTROL and then TAB.



10. Once the plot is selected press the MENU key. Press ENTER and scroll to 2 (Box Plot). Press ENTER again.



11. Now we can use the circular key pad to move the pointer hand to read off the median and quartiles.



There are many new cool features of the TI-nspire. The TI nspire comes with a larger screen and interchangeable keypads, one that is a new layout for the TI-nspire and another that is the same keypad as the TI 84, both of which have individual keys for each letter in the alphabet. This makes typing and entering letters easier. The nspire also has many new shortcut functions that allow you to handle and use the calculator with ease. Such shortcuts include being able to use `ctrl - c`, `ctrl - x` and `ctrl - v` like you would on a computer, to copy, cut and paste information from one document to another. There is also a redo and undo button so you can quickly fix an error without having to start all over again. The TI - nspire also indicates battery status, informing you by a popup icon whether you battery is low, good, or critical. If you need help the TI- nspire has a hints application. Hints provide helpful information to navigate the handheld.

Each document on the TI- nspire can contain 30 problems; each problem can contain 50 pages. The calculator allows you to view all pages in thumbnail form as well as move the pages around in any order you need them in. This becomes especially helpful for teachers who use the TI -nspire as a lesson planning device. Teachers or students may type a lesson with directions, and notes into the calculator then insert their graphical representation into the notes with just a click of the a few buttons.

The TI - nspire has many of the same properties as geometers sketchpad. You might say it is a handheld traveling geometers sketchpad. When using the *Graphs and Geometry* tool you will find that drawing figures, hiding, labeling and calculating are all the same as using geometers sketchpad on a PC.

This calculator makes writing proofs easy. There is a proof template that creates a "t chart" on the screen. This allows students and teachers to use on side as the statement column and the other as the reason/proof column.

It lends some help to the teachers of America by coming with a testing mode. When using this mode a LED flashes to inform teachers that the calculator is still restricting features and possibly saved files on the handheld during the test.

