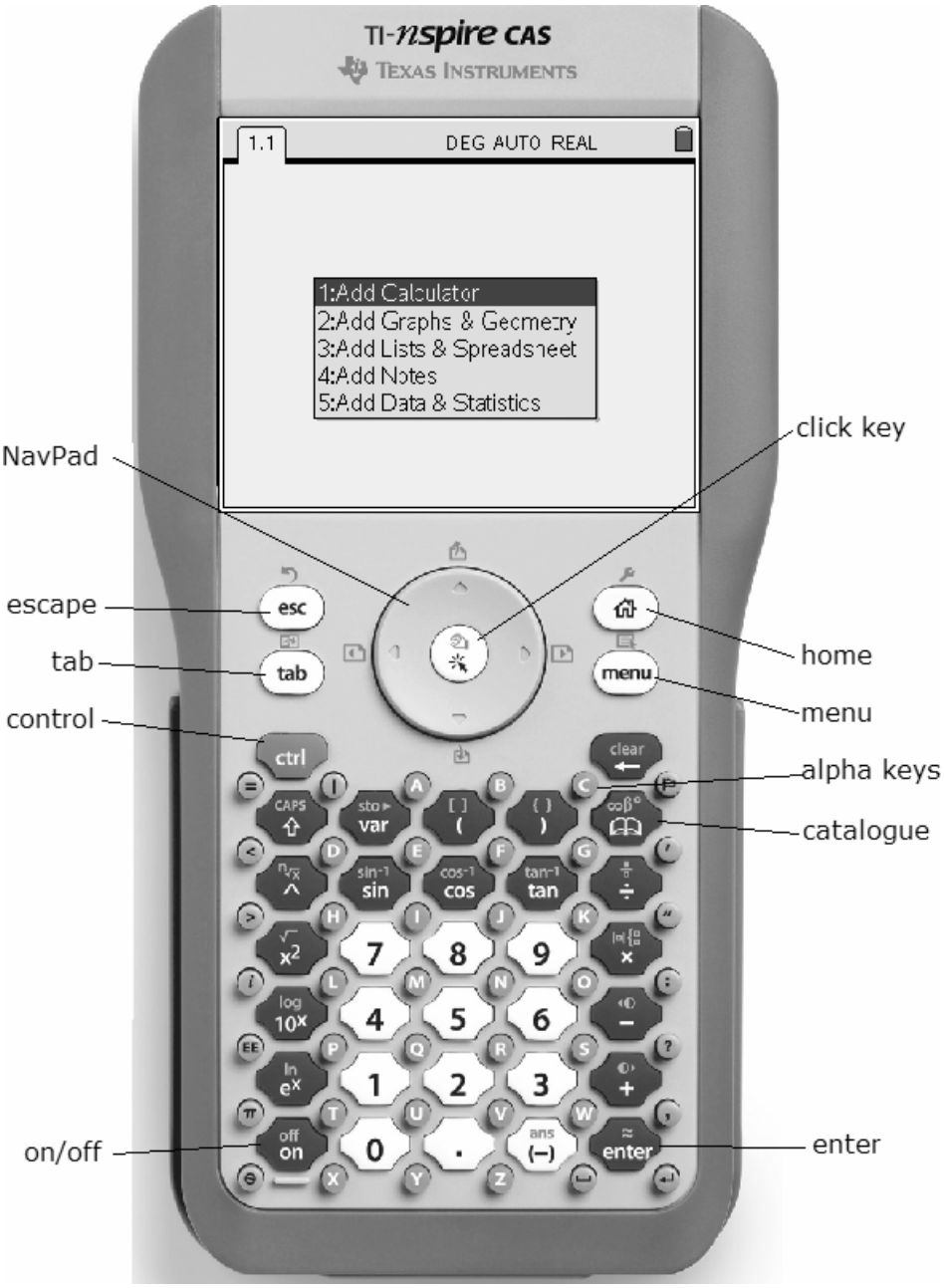
Name: _____ Date: _____

The TI-Nspire™ CAS Calculator



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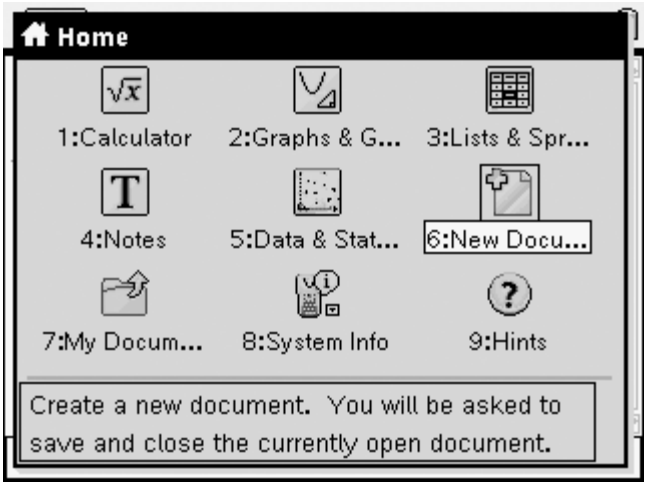
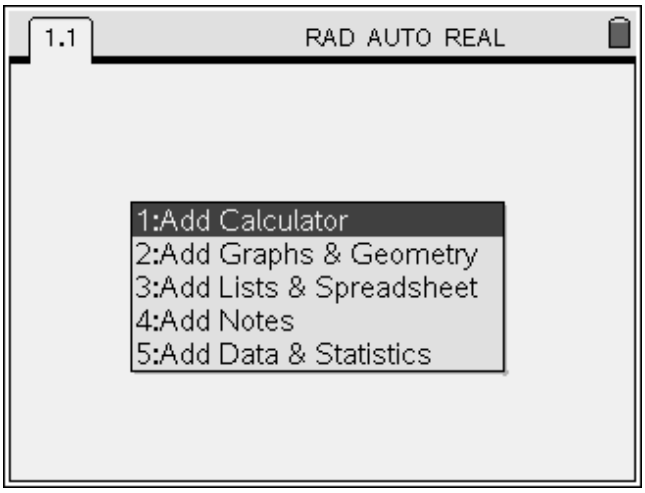
Opening a New Document

- Turn on the TI-Nspire™ CAS. Press (home), and select **New Document**.
- Select the kind of page you want to open. You have several choices.
- **Add Calculator** lets you perform calculations.
- **Add Graphs & Geometry** lets you plot functions and other graphs, or draw sketches similar to dynamic geometry software.
- **Add Lists & Spreadsheet** allows you to work with lists in a spreadsheet environment.
- **Add Notes** lets you type notes.
- **Add Data & Statistics** lets you work with your lists.

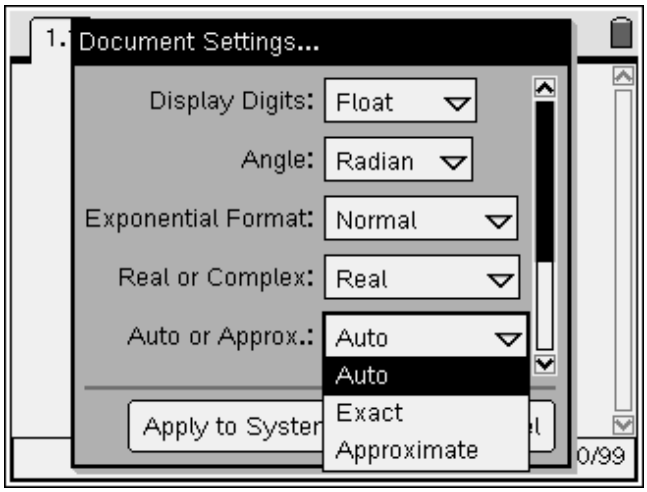




Setting Auto/Approximate Mode

- Press (home) and select **System Info**.
- Select **Document Settings…** if you want the changes to apply only to the current document, or **System Settings...** if you want the changes to apply to all documents that you open.
- Scroll to the **Auto or Approx.** field and set to **Approximate**.
- Scroll to OK and click (ctrl) to finish.

This will set the calculator to display approximate decimal answers.



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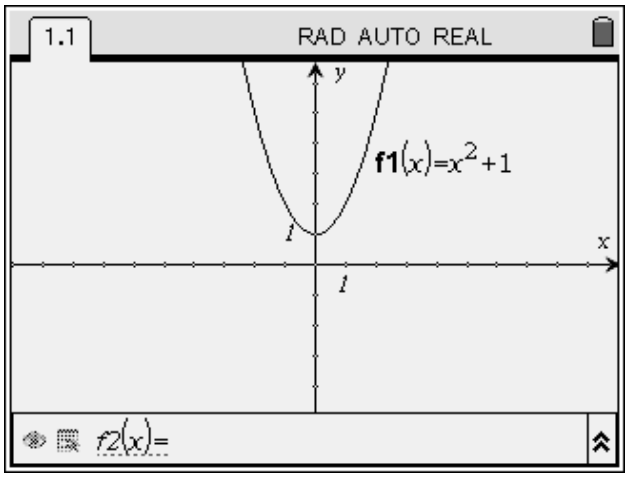
Plotting a Function



- Open a new **Graphs & Geometry** page.
- In the entry line, you will see $f1(x) =$. Type $x^2 + 1$ as a sample function, and press enter.

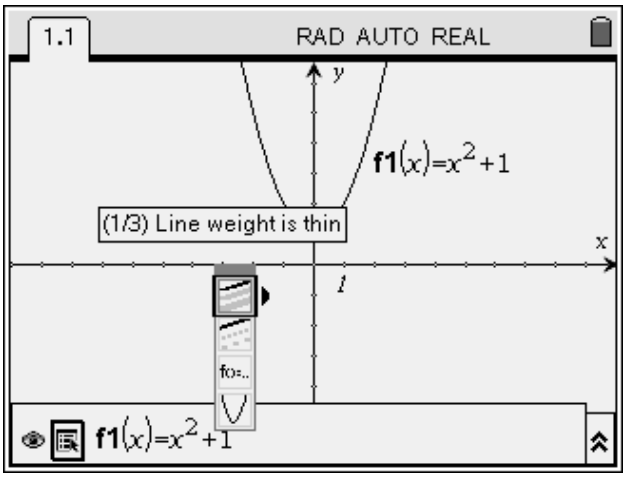
Note: The function is displayed with its equation as a label. The entry line has moved to function $f2(x)$.

To change the window settings of the graph:

- Look at the axes. This is the standard window for the TI-Nspire™ CAS. To see, or change, the window settings, press menu, select **Window**, and then **Window Settings**.

To hide or view the graph:

- Press tab. Then, press up on the NavPad once. The function $f1(x)$ will be displayed in the entry line.
- Press tab until the eye symbol at the left of the entry line is selected. This allows you to hide or view the graph.
- Press enter once. Note that the graph is hidden.
- Press enter again. The graph reappears.



To change the attributes of the graph:

- Press tab once to select the attributes symbol to the right of the eye symbol.
- Press enter to display the attributes menu. You can use this menu to adjust the line weight, the line style, the label style, and the line continuity. Use up/down on the NavPad to select the attribute, and then left/right on the NavPad to change the attribute.
- When you are finished, press esc to return to the graph screen.

To change the view of the graph:

- You can change the appearance of the window. Press menu and select **View**. There are several options. For example, if you choose **Show Axes End Values**, you can display the current range of each of the axes.

To move the function label:

- Press tab once. The entry line will grey out, and the cursor will move to the graphing window.
- Move the cursor over the function label. When you are in the right place, the word "label" will appear, along with a hand symbol.
- Press ctrl, then ⬚. The hand will close to "grab" the label. Use the cursor to move the label around the screen. When you are finished, press esc.

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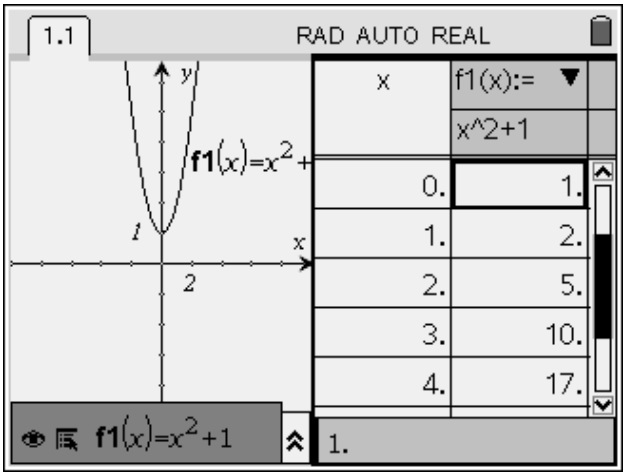
To move the graph around the screen:

- Move the cursor to a blank space in the second quadrant. Press ctrl, then ☜. A hand will appear.
- Use the cursor to move the hand around. Notice that the hand has grabbed the entire graph and will move it around the screen. When you are finished, press esc.

To see a function table:

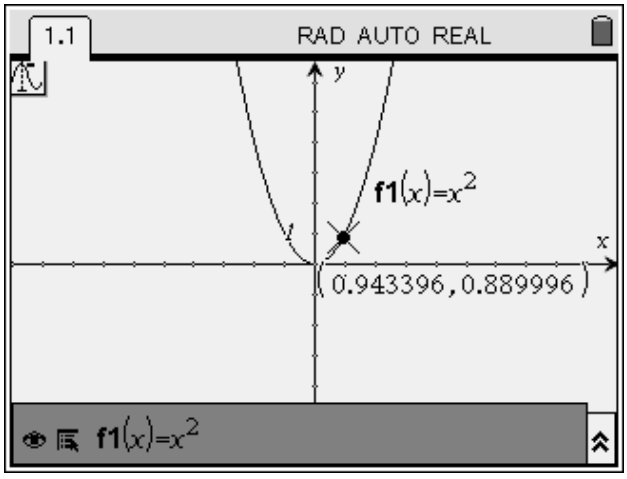
- Press tab once to return to the entry line. Press up on the NavPad once to return to the function $f1(x)$.
- You can display a table of values for the function. Press menu, and select **View**.
- Select **Add Function Table**. You can scroll up and down to inspect different values.
- Press menu. Select **Function Table**, then **Edit Function Table Settings**. You can adjust the table start value and the table step value.



Tracing a Function

- Open a new **Graphs & Geometry** page.
- For $f1(x)$ =, type x^2 as a sample function, and press enter.
- Press menu, select **Trace**, then **Graph Trace**.
- Use the cursor to trace along the graph.

The coordinates of the traced point will be displayed.



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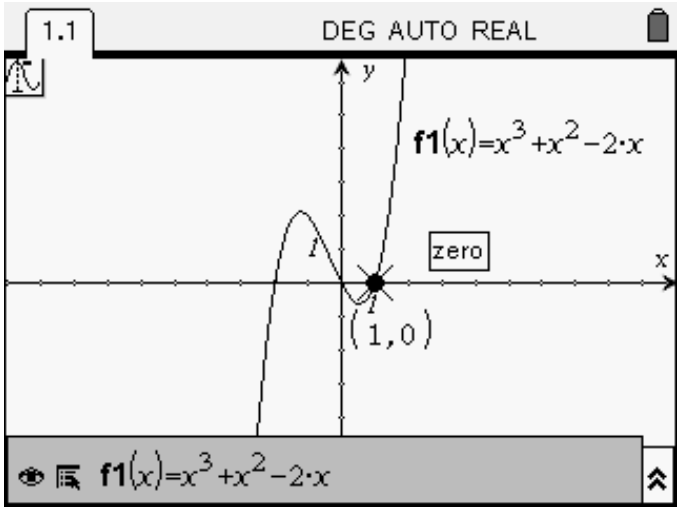
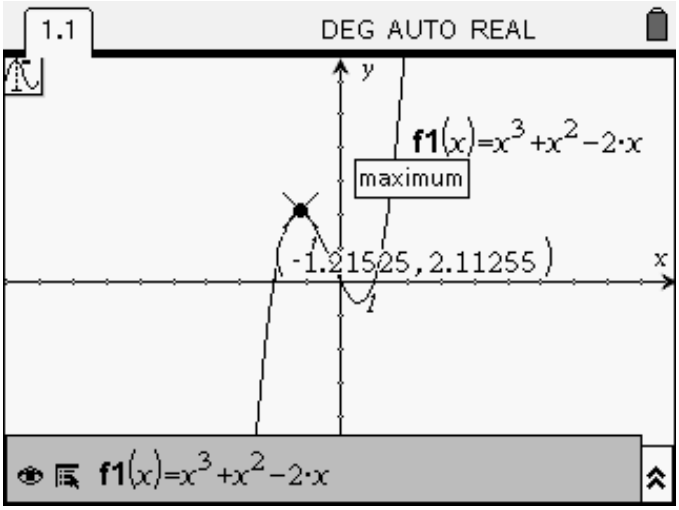
Finding a Zero/Maximum/Minimum Value

- Open a new **Graphs & Geometry** page.
- For $f1(x)$ =, type $x^3 + x^2 - 2x$ as a sample function, and press enter.
- Press menu, select **Trace**, then **Graph Trace**.
- Use the NavPad to drag the point to the right-most zero on the graph. A box with "zero" will appear, along with the coordinates of the zero.
- Continue dragging the point to the minimum on the graph. A box with "minimum" will appear, along with the coordinates of the minimum.
- Continue dragging the point to the maximum on the graph. A box with "maximum" will appear, along with the coordinates of the maximum.





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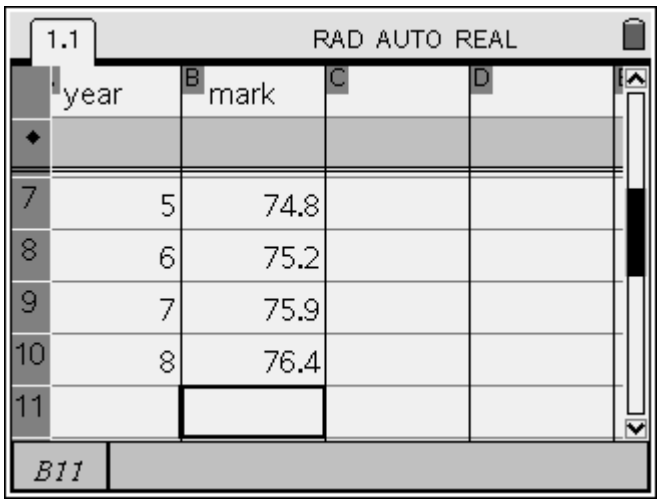
Drawing a Scatter Plot

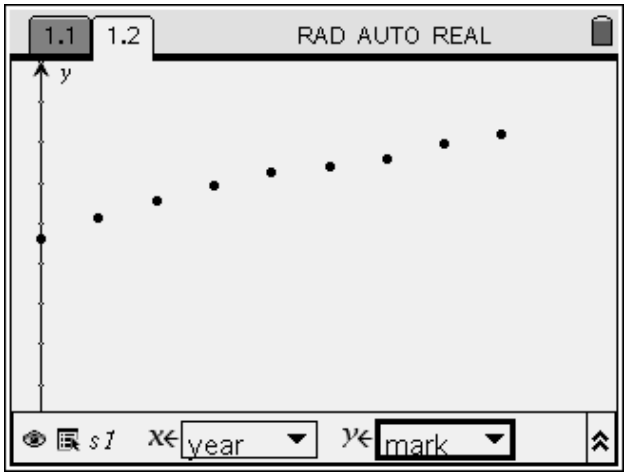
The average mark on a standardized math test for several years running is shown in the table. Create a scatter plot for the data.

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006
Mark	71.2	72.3	73.1	73.9	74.5	74.8	75.2	75.9	76.4

- Open a **Lists & Spreadsheet** page.
- Enter the year title and data in column A. Call 1998 year 0.
- Enter the mark title and data in column B.



- Open a new **Graphs & Geometry** page.
- Press (menu), and select **Graph Type**. Change the graph type to **Scatter Plot**.
- Select **year** from the *x*-axis drop-down menu. Select **mark** from the *y*-axis drop-down menu.
- Press (menu). Select **Window**, then **Window Settings**. Change **XMin** to –0.5 and **XMax** to 10.0. Change **YMin** to 60 and **YMax** to 80. Select **OK**.
- Your scatter plot will appear as shown.



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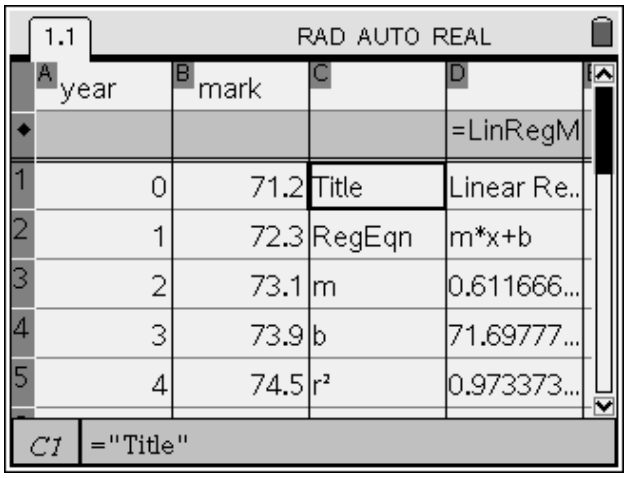
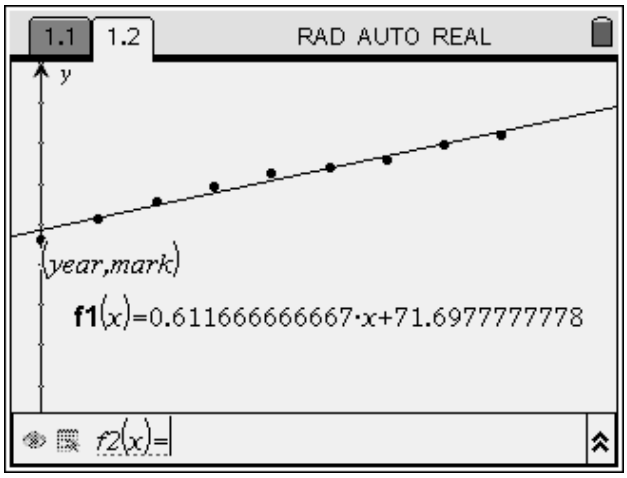
Linear Regression and Graphing

Refer to the time and mark data in **Drawing a Scatter Plot**.

- Return to the **Lists and Spreadsheet** page and press (menu).
- Select **Statistics**, then **Stat Calculations**.
- Select **Linear Regression (mx + b)**.
- Select **year** for the **X List,** and **mark** for the **Y List**.
- Tab down and select **OK**. The linear equation of best fit will be displayed: $y = 0.61x + 71.7$.
- Press (ctrl) and right on the NavPad to return to the **Graphs & Geometry** page. Set the graph type back to **Function**.
- Press (tab).

The line of best fit will be displayed.





Shortcut Key Sequences

Many of the shortcut key sequences that work in a Microsoft® *Windows* environment also work on the TI-Nspire™ CAS. Here is a brief summary of some of the shortcuts:

(ctrl) C: copy
(ctrl) V: paste
(ctrl) X: cut
(ctrl) Z: undo
(ctrl) Y: redo
(ctrl) I: insert page
(ctrl) G: hide or show entry line

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