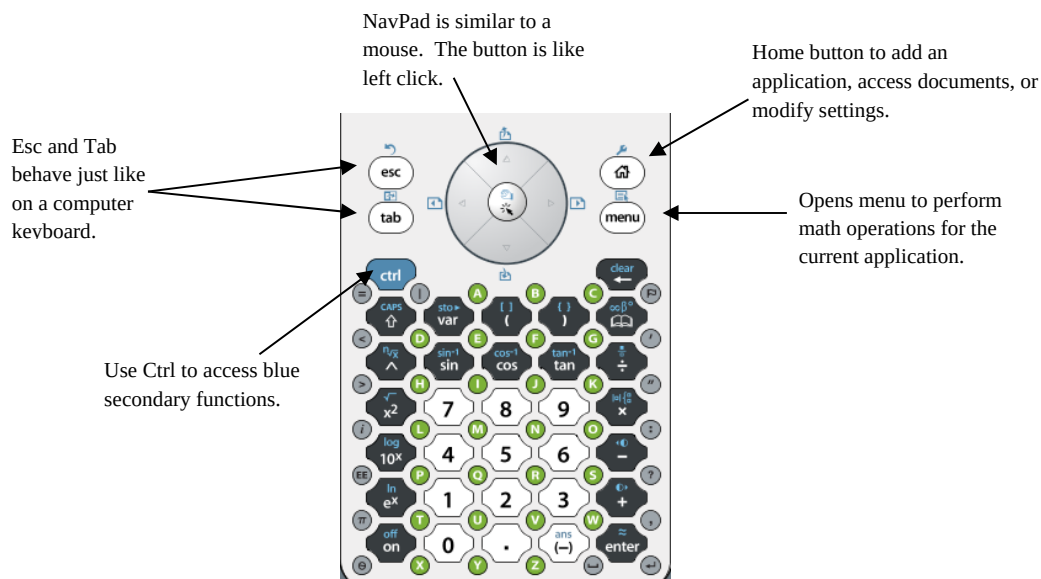


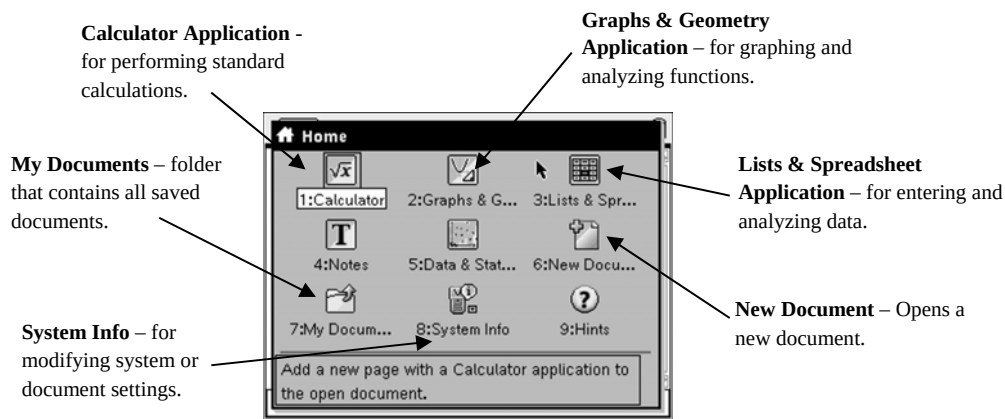
This primer will help you get a feel for the TI-Nspire calculator, which is quite a bit more powerful than the TI-84 you may be used to using. You might think of the Nspire as more like a mini computer where you can save and review work within a file system and take advantage of standard PC shortcuts (e.g. CTRL+S, CTRL+V). The more you remind yourself of this similarity to computers, the faster you will become comfortable with this calculator. But before we get in too deep, let's start with some basics.

I. Keypad Basics



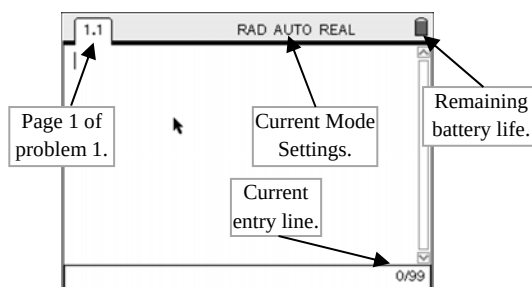
II. Home Screen Basics

The home screen is like the Start menu on a PC, allowing you to select from all possible applications. Press  to view the home screen. To select an option either type the corresponding number or use the NavPad to highlight the option and then press .



III. Using the Calculator Page

From the Home screen, open a new calculator page by pressing $\text{[2nd]} \text{[1]}$ on 1:Calculator (you can also press the click button $\text{[2nd]} \text{[1]}$ or just [1]). Your screen will look like this:



1. Here we can perform standard calculations. Try the following:

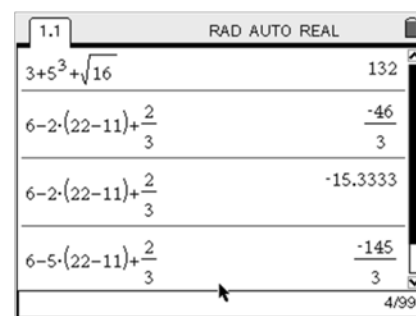
a. $3+5^3+\sqrt{16}$ (use right arrow to exit the exponent and $\text{[2nd]} \text{[x^2]}$ for square root.)

b. $6-2(22-11)+\frac{2}{3}$

Notice the answer is given in exact form. To obtain a decimal approximation press $\text{[2nd]} \text{[enter]}$. Try it.

c. $6-5(22-11)+\frac{2}{3}$

Before you type the entire expression, arrow up to access the previous entry, hit enter and then modify.



2. The Nspire can also work with expressions containing variables. Try the following:

a. $4x-7x+6x$ (for x use the small green key next to [0] .)

b. $6b-2b-9$

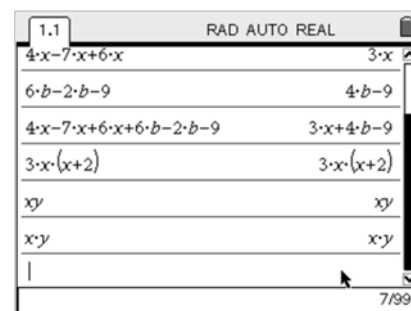
c. Add the expressions given in parts *a* and *b* above. (Use the up arrow to access previous entry and press enter to copy it.)

d. $3x(x+2)$

Note: you must type the multiplication symbol $\text{[2nd]} \text{[x]}$ between x and the parentheses.

e. Type $\text{[x]} \text{[y]}$ and press $\text{[2nd]} \text{[enter]}$. Then type $\text{[x]} \text{[2nd]} \text{[x]} \text{[y]}$ and press $\text{[2nd]} \text{[enter]}$.

Notice the difference between the two answers. xy is recognized by Nspire as a variable, while $x \cdot y$ means x multiplied by y .



Clear the page by pressing $\text{[menu]} \text{[1]} \text{[5]}$.

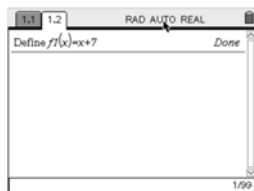
Suppose we wanted to show our work again. Press $\text{[ctrl]} \text{[esc]}$ to undo the last operation. You should see all of your prior work.

**** Helpful Hint:** Use $\text{[ctrl]} \text{[esc]}$ to UNDO the last operation on any page.

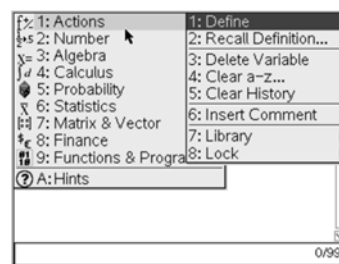
IV. Viewing a table of values.

First, we need to enter the equation. Begin with a fresh Calculator page by pressing Home (⌂) and then selecting 1:Calculator. Press (⌂) and select 1:Actions and 1:Define.

We will create a table for the equation $y = x + 7$. The calculator uses a different notation: instead of “ $y =$ ” the Nspire CAS writes “ $f1(x)=$ ” which is function notation. We need to tell the calculator that $f1(x) = x + 7$, as shown below.

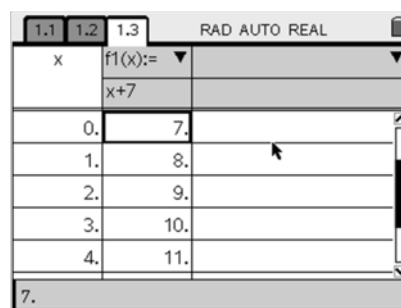
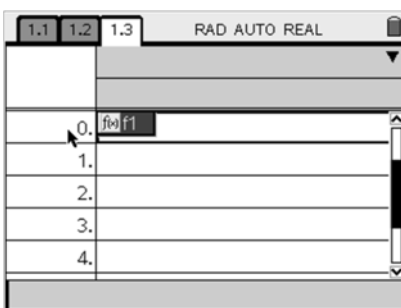
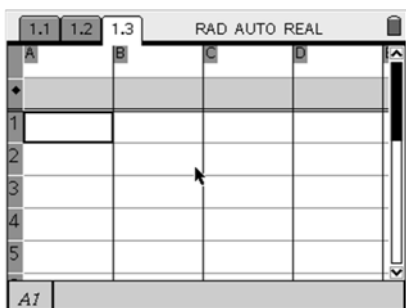
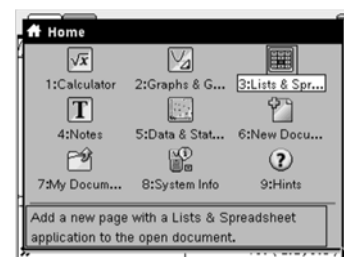


Now we're ready to look at our table!

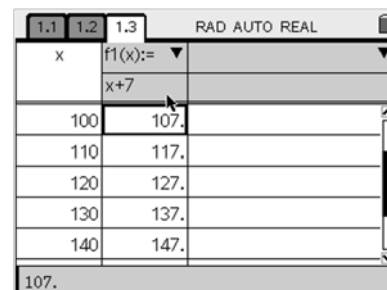
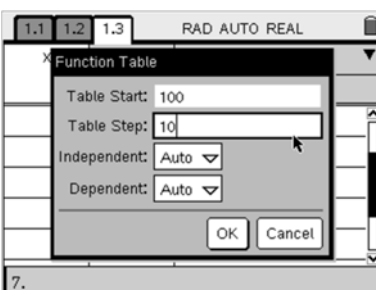
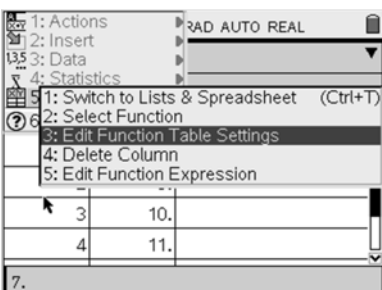


To **view a table of values** for our equation, we need to start by adding a new Lists & Spreadsheet page. Press Home (⌂) and select 3:Lists & Spreadsheet by pressing the number 3 (or arrow right and press (⏏)).

Now Press (ctrl) (T) to insert a table, and then press (⏏) to select $f1$. Use the NavPad to scroll up/down the table. What is the y -value when $x = -8$?



We can **modify the function table** settings. Say, for example, that we wanted the x -values to start at 100 and go up by tens. To do this, press (⌂) (5) (3), to select 3:Edit Function Table Settings. “Table Start” gives the first x -value in your table, and “Table Step” gives the change in x -values from one line of the table to the next. Change the values to match the screenshot below, in the center. Use (tab) to move the cursor down and (⏏) (tab) if you need to move up. Press (⏏) or click OK to save these settings.

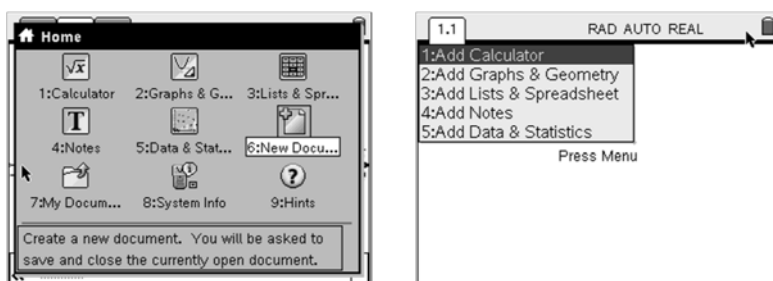


**** Helpful Hint:** Now we have several pages in our document. Move between pages by pressing (ctrl) and then left/right arrows on the NavPad.

V. Opening a new Document (Getting a Fresh Start!)

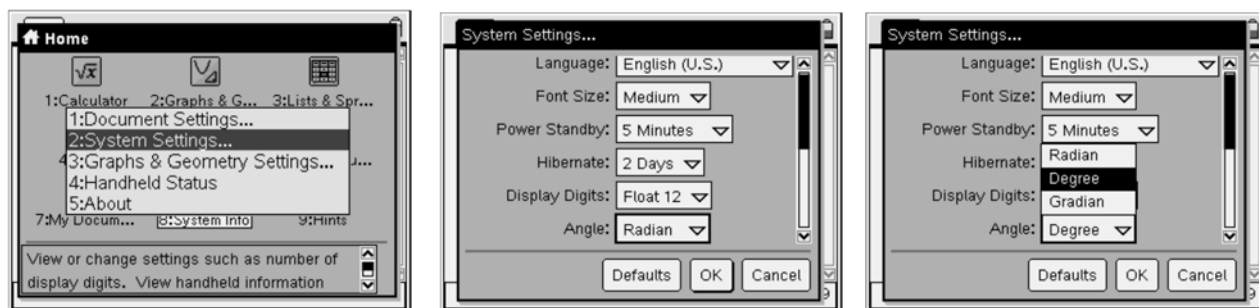
A quick way to get a fresh start (when starting a new problem, for example) is to open a new document. When you do this, everything you've been working on will be erased.

Press $\left[\frac{\square}{\square}\right]$ and select 6:New Document. If you currently have an unsaved document open, you will be asked if you want to save the current document. You can, of course, choose "no," and this is usually what you will want to do. The keypad shortcut for opening a new document is $\left[\text{ctrl}\right]\left[\text{N}\right]$, just like in Microsoft Word.



VI. Modify Settings

To access the mode settings, press $\left[\frac{\square}{\square}\right]$ and select 8:System Info. Select option 2:System Settings. The default setting for angle measurement is "radians," something we don't know about. Let's change the angle mode from radian to degree. Tab down to Angle and click $\left[\frac{\square}{\square}\right]$ to view the options. Use the NavPad to select Degree. Press $\left[\text{enter}\right]$ twice to save the change. If you are prompted to apply the change to the current document, press $\left[\text{enter}\right]$ on Yes.



VII. About Information

To determine the version of the operating system of your Nspire, open the 'About' information by pressing $\left[\frac{\square}{\square}\right]\left[8\right]\left[5\right]$. Verify that you are using version 1.7.

What are the last four characters of the Product ID? _____

