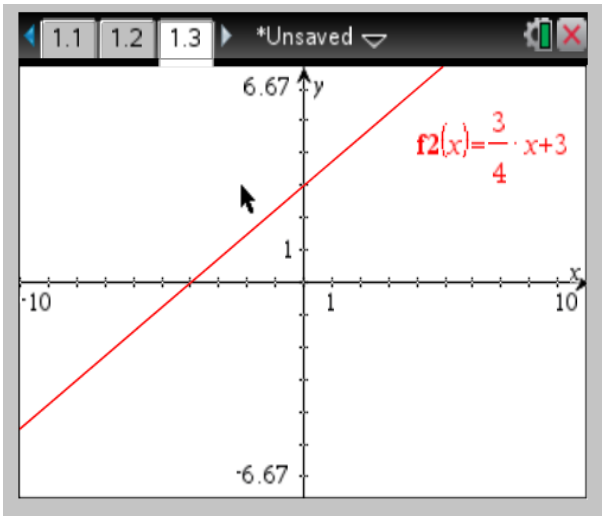
MATH SUMMER PACKET

INSTRUCTIONF FOR THE TI-NSPIRE CX CALCULATOR

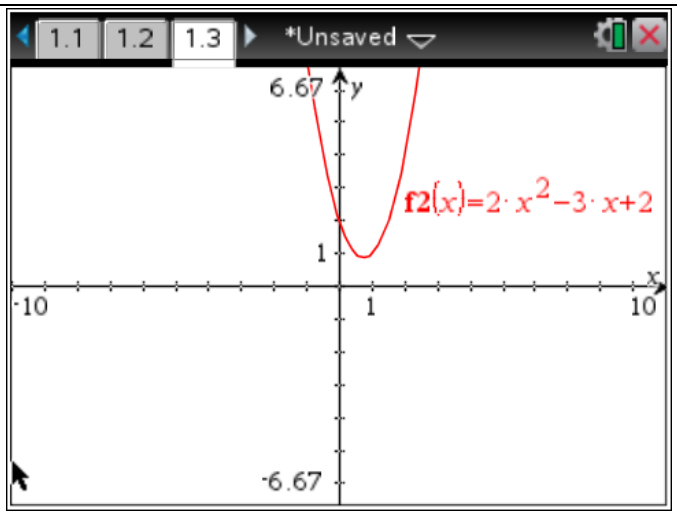
I. **Using your graphing calculator** (Keystrokes below are based on using a TI-Nspire calculator):

A. Be able to do **basic graphing**

a) Graph $y = \frac{3}{4}x + 3$



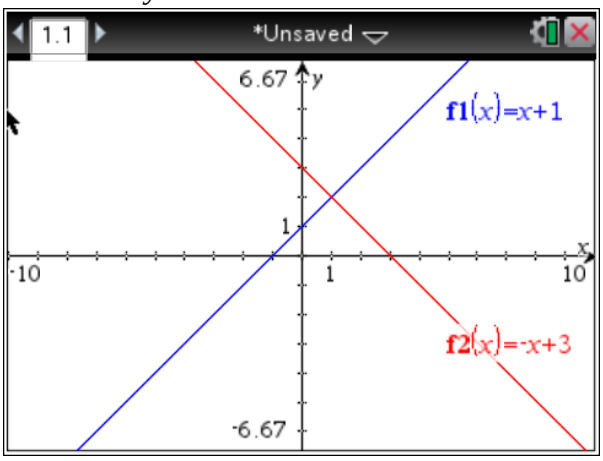
b) Graph $y = 2x^2 - 3x + 3$



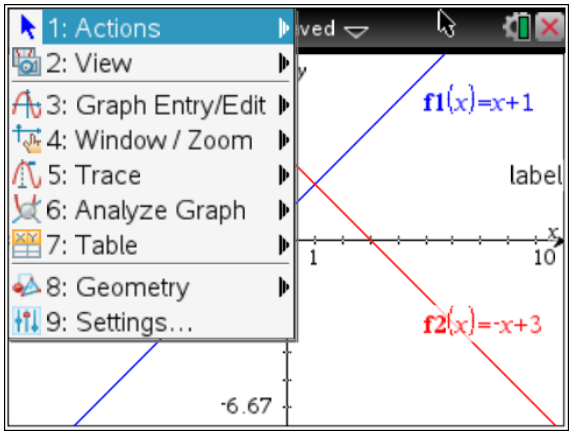
c) **Find the intersection** of the lines $\begin{aligned} y - x &= 1 \\ y + x &= 3 \end{aligned}$ using the intersection function on your calculator. .

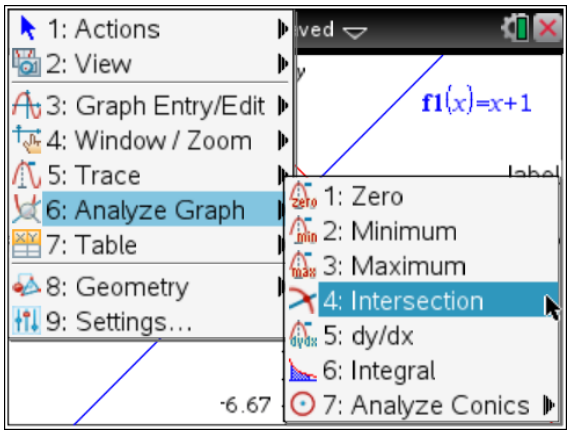
1. Solve the above Equations for y. $\begin{aligned} y &= x + 1 \\ y &= -x + 3 \end{aligned}$

2. Graph on calculator

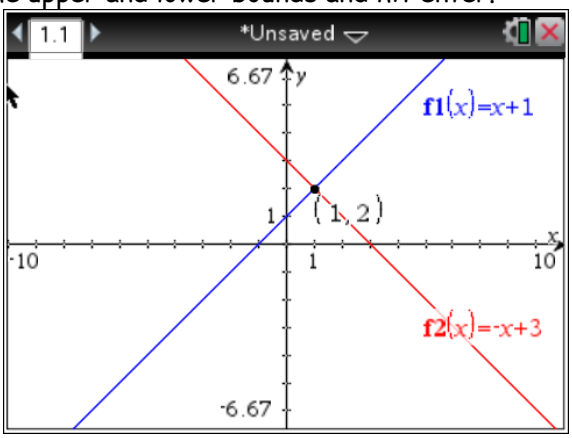


3. Press **Menu**. 4. Highlight **Analyze Graph** and **Intersection**.



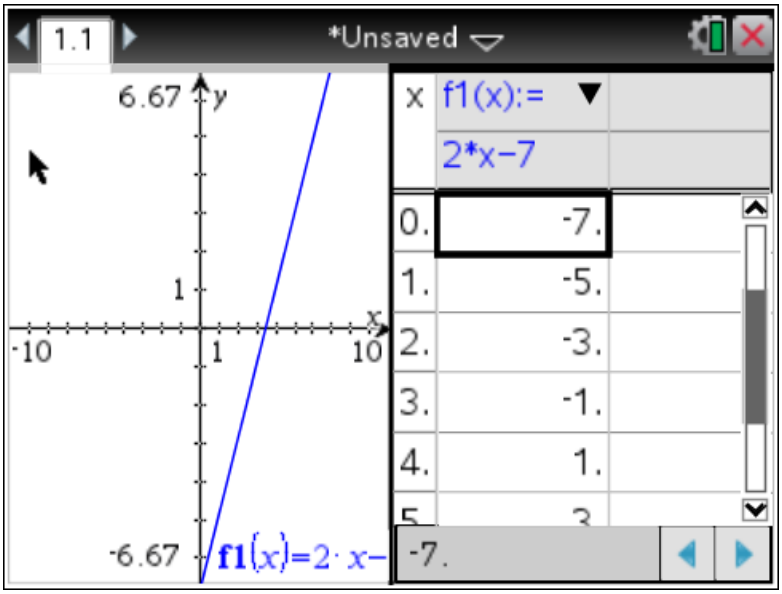


5. Using the cursor, highlight the upper and lower bounds and hit enter.

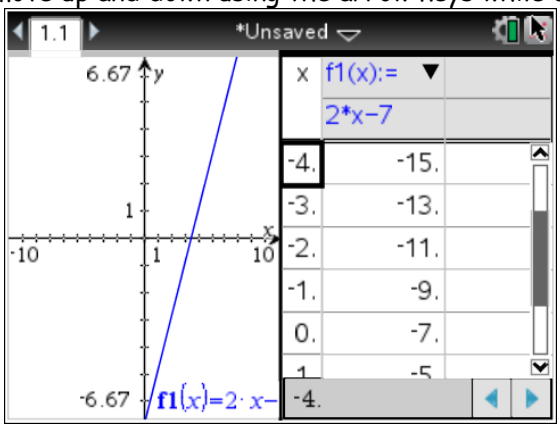


6. The *x* and *y* coordinates appear at the bottom of the screen. The solution to the system is $(1,2)$

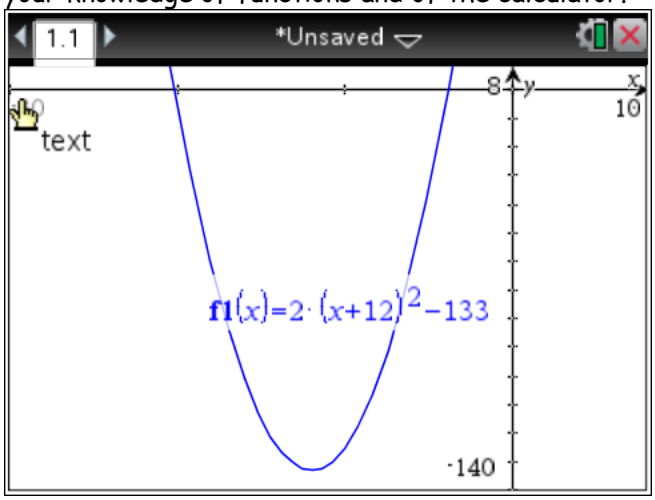
d) Find values **using tables**. 1. Graph the line $y=2x-7$ 2. Access the table by pressing **menu** and **Table** or use **CNTRL T**.

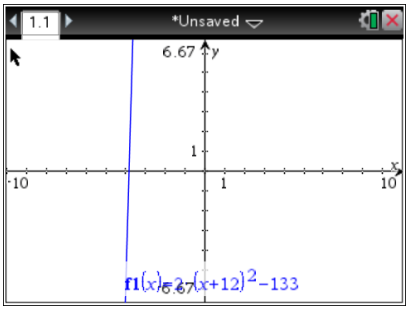


3. You can move up and down using the arrow keys while on the table.

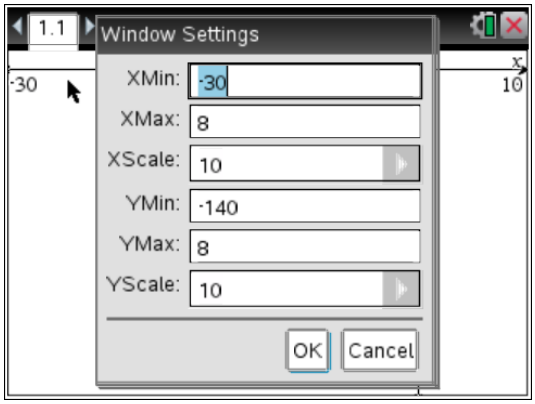


e) To see the graph of $f(x)=2(x+12)^2-133$, be able to **set the window manually**, using both your knowledge of functions and of the calculator.





To set the window so you can see the function, go to **Menu**, **Window/Zoom**, and **Window Settings**. Now, set your window by changing the values to look like the ones below.

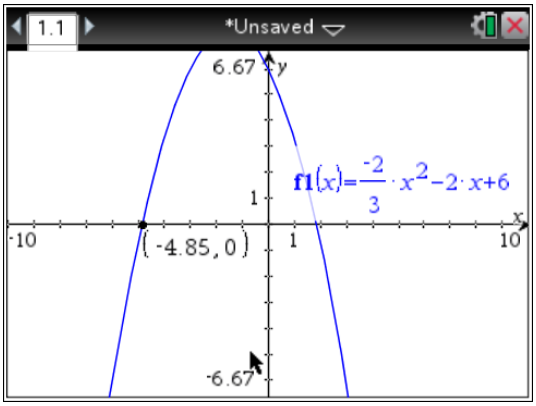


Your graph should look like the one at the left.

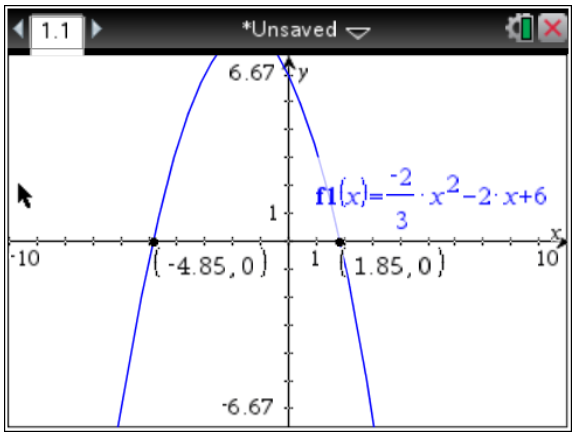
Be able to find the **zeros**, (also known as **roots** or **x-intercepts**) using the calculation menu.

Problem: Find the zeros of $f(x)=\frac{2}{3}x^2-2x+6$

1. Enter the function into the calculator as a graph
2. Press **Menu**, **Analyze Graph**, and **Zero**.
3. Highlight the upper and lower bounds and hit enter.

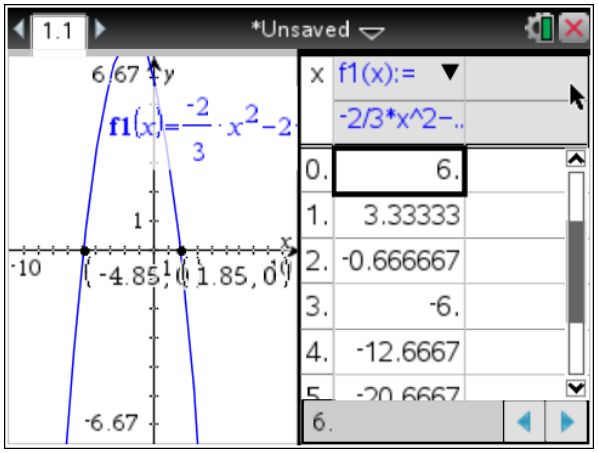


4. Repeat steps 2 and 3 to find the second zero.

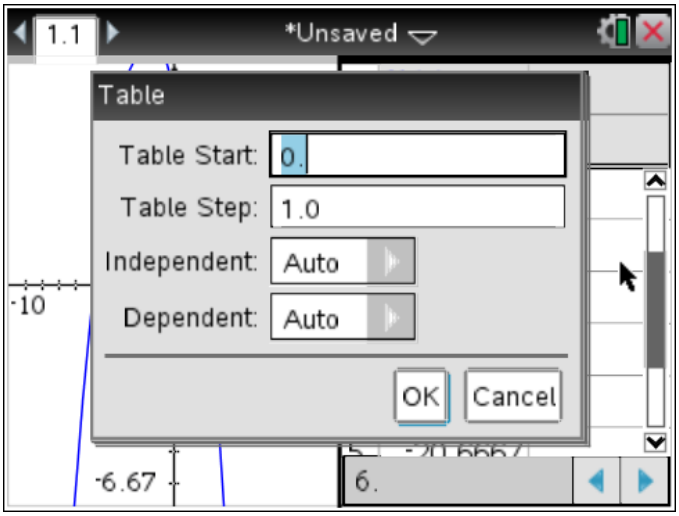


C. Know how to use the **Table Set** function.

1. First, use **CTRL T** to get the table visible on the screen.



2. Access the Table Set function by pressing **Menu, Table, Edit Table Settings**. You can change the TABLE so that the x-value increases by different increments by changed the Table Step. You can also change the x-value to start with by changing Table Start.


1.1
*Unsaved
Table
Table Start:
0.
Table Step:
1.0
Independent:
Auto
Dependent:
Auto
OK
Cancel
-10
-6.67
6.