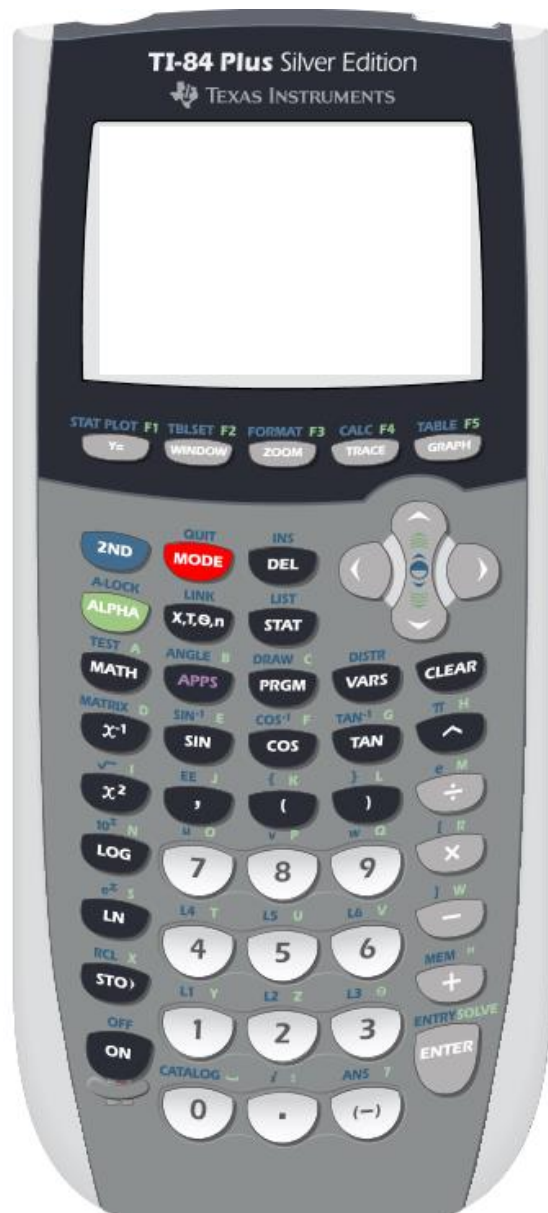


# MATH SUMMER PACKET

## INSTRUCTIONS FOR THE TI-84 CALCULATOR

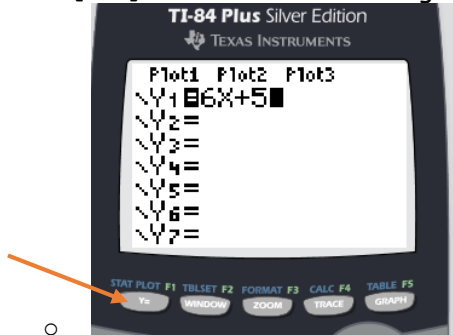


# MATH SUMMER PACKET

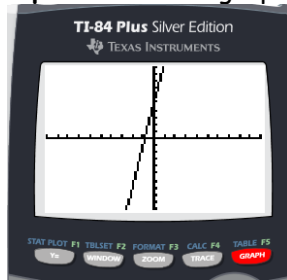
## INSTRUCTIONS FOR THE TI-84 CALCULATOR

- I. Using your graphing calculator (Keystrokes below are based on using a TI 83-Plus or TI 84 Calculator):  
A. Be able to do basic graphing

- Press [Y =] and enter the following equation:  $6x + 5$

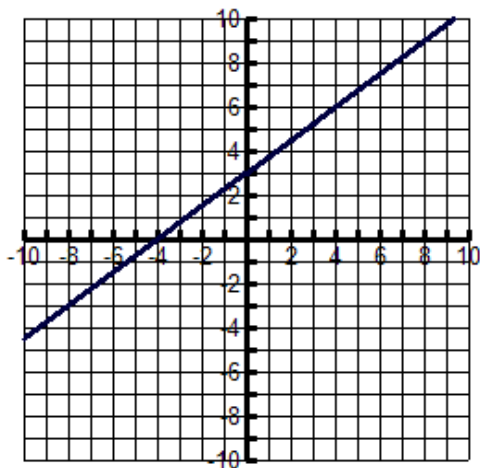


- Press **Graph** to view the graph

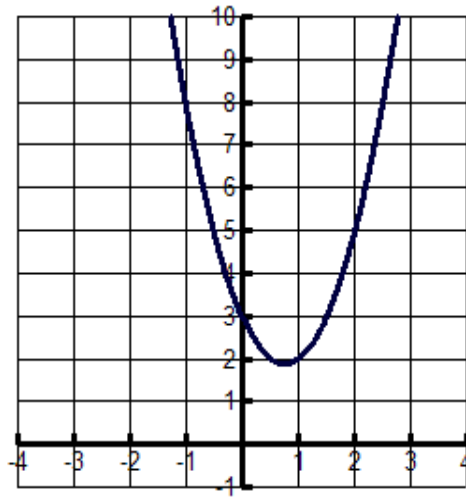


- Your turn!

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



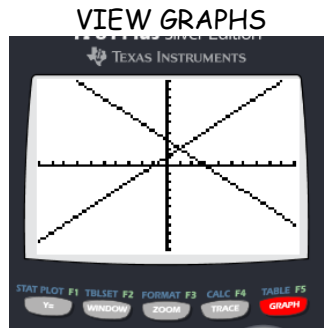
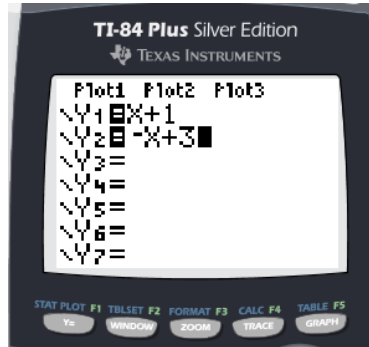
b) Graph  $y = 2x^2 - 3x + 3$



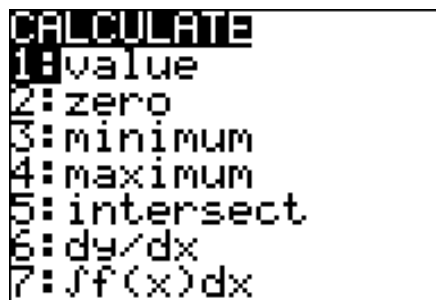
c) Find the intersection of the lines  $y - x = 1$  and  $y + x = 3$  using the intersection function on your calculator.

1. Solve the above Equations for y.  $y = x + 1$   
 $y = -x + 3$

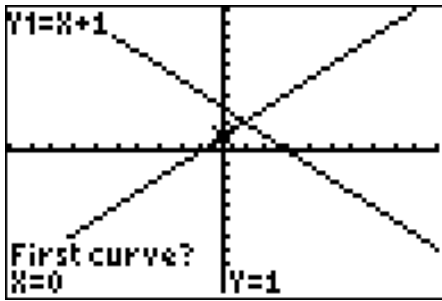
GRAPH BOTH EQUATIONS.



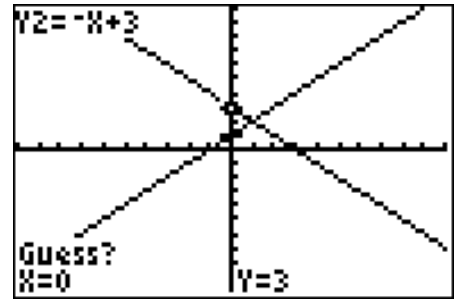
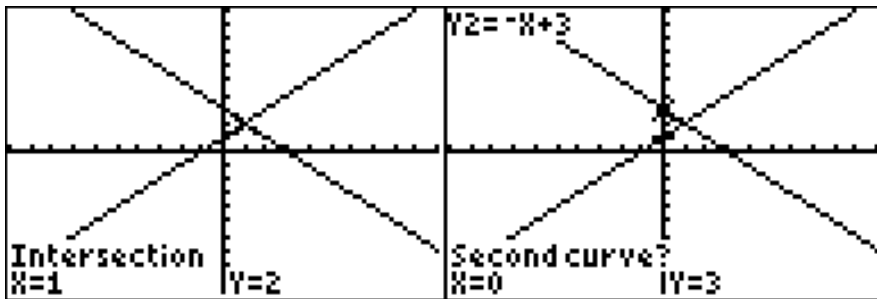
PRESS 2<sup>ND</sup> TRACE THEN THE CALC MENU. Your screen should look like the one below.



PRESS 5 FOR INTERSECT OR CURSOR DOWN AND PRESS ENTER. Your screen should now look like this:



5. Press **ENTER** 3 times, (once at each prompt)



6. The x and y coordinates appear at the bottom of the screen. Your screen should look like the third one above. The solution to the system is (1,2)

d) Find values using tables.

GRAPH THE LINE  $y = 2x - 7$

ACCESS THE TABLE BY PRESSING **2<sup>ND</sup> GRAPH**. The table screen should look like the one below

X	Y1	
-4	-15	
-3	-13	
-2	-11	
-1	-9	
0	-7	
1	-5	
2	-3	

X = -4

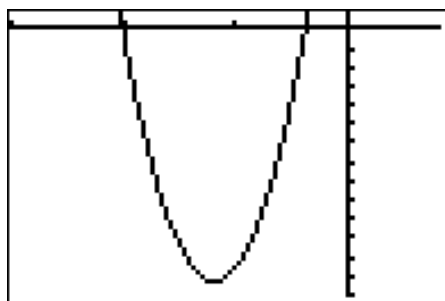
3. You can move up and down using the arrow keys while on the table while the cursor is on the x-values.

X	Y1	
-2	-11	
-1	-9	
0	-7	
1	-5	
2	-3	
3	-1	
4	1	

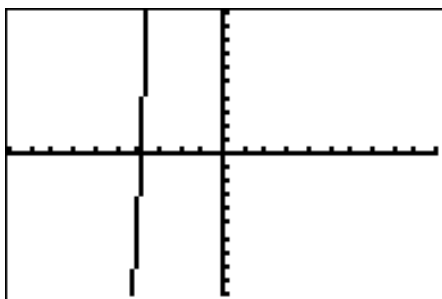
X = 1

e) To see the graph of  $f(x) = 2(x+12)^2 - 133$ , you will need to **set the window manually**, using both your

knowledge of functions and of the calculator.



In order to view the function on the left, first press **ZOOM 6** and then **ENTER**. Your graph will look like the one below.



Now, set your window by pressing the **WINDOW** key and changing the values to look like the ones below.

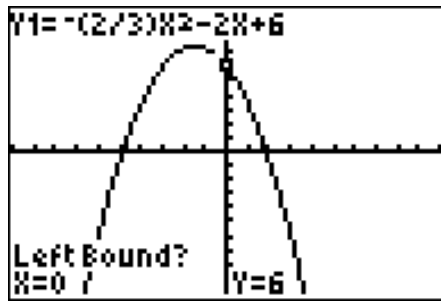
```
WINDOW
Xmin=-30
Xmax=8
Xscl=10
Ymin=-140
Ymax=8
Yscl=10
Xres=1
```

Your graph should look like the one above.

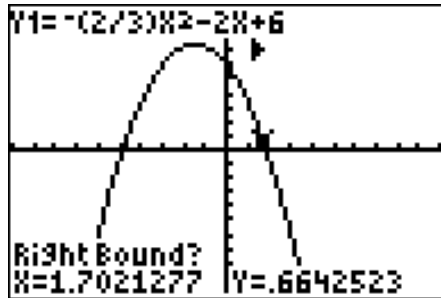
Be able to find the **zeros**, (also known as **roots** or **x-intercepts**) using the calculation menu.

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

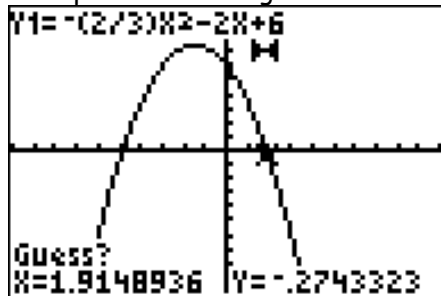
1. Enter the function into the calculator. Be sure to press **ZOOM 6** in order to go back to the standard screen.
2. Press **CALC** (2<sup>nd</sup> TRACE) to access the calculate menu
3. Press 2 (or cursor down) and hit **ENTER** for **ZERO**. Your screen will now look like this:



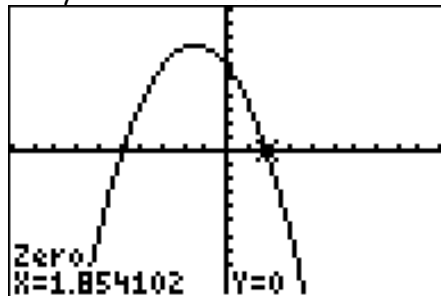
3. Use the arrow keys to move the cursor close to where the function crosses the x-axis and press ENTER. Your screen should now look like this:



4. Move cursor to the right of the zero and press ENTER again. Your screen should look like the one below.



6. Press ENTER a third time and the x and y coordinates of that x-intercept will be on the bottom of the screen.



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

1. Access the Table Set (TBLSET) function by pressing **2<sup>nd</sup> WINDOW**. You can change the TABLE so that the x-value increases by different increments. For example, cursor down to  $\Delta Tbl = \underline{\hspace{1cm}}$  and change the number 0.5. Then the independent variable will increase by 0.5

```

TABLE SETUP
TblStart=-2
ΔTbl=.5
Indpt: Auto Ask
Depend: Auto Ask
  
```

X	Y1	
-2	7.3333	
-1.5	7.5	
-1	7.3333	
-.5	6.8333	
0	6	
.5	4.8333	
1	3.3333	
X = -2		

2. Go to the TABLE (2<sup>nd</sup> GRAPH) and confirm this.