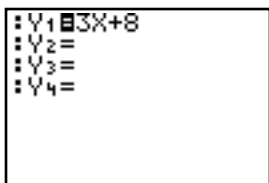


TI-81 Procedure 7: *Solving Equations*

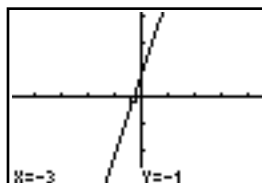
Example

Solve the equation $3x + 8 = 0$ by graphing.

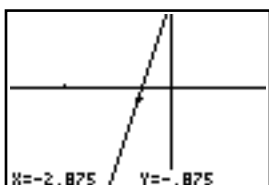
STEP 1: Press **Y=** and enter the equation $y = 3x + 8$ as the function **Y1**.



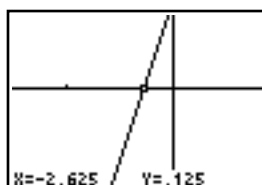
STEP 2: Press **ZOOM 8 ENTER** to see the graph with integer coordinate points. Find the x -intercept by pressing **TRACE** and then pressing **◀** three times.



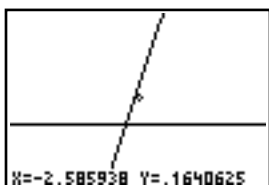
STEP 3: Press **ZOOM 2 ENTER** to get more precise coordinates. The calculator zooms in by a factor of four on the point $(-3, -1)$.



STEP 4: Move the cursor to the x -axis using **TRACE** and **▶**. You cannot find the exact intersection because screen precision is limited.



STEP 5: Zoom in closer on the x -intercept by pressing **ZOOM 2 ENTER ENTER**.



STEP 6: Press **TRACE** and then press **◀** five times to move to the x -axis. Estimated from the screen, the x -intercept is $-\frac{8}{3}$.



Y=: If the given equation is not equal to zero, enter the left side as **Y1** and the right side as **Y2**. Find the intersection of the two equations. See Procedure 9 for this technique.

Exercises

Graph each equation. Find the solution.

1. $5 - 13x = 0$

2. $6x - 12 = 0$

3. $x^2 + 2x - 8 = 0$

4. $x^2 - 5x + 4 = 0$