

How to Do Page 174 #5a) Using TI-Nspire™ With Touchpad

Use TI-Nspire™ with Touchpad to graph $y = 3x^2 + 7x - 6$ and identify characteristics of the graph.

1. Press the home key and open a new document and then 2: Add Graphs.

2. Enter the equation by pressing $3 \times [x^2] + 7 \times [-] 6$ as shown in Figure 1. Press $\boxed{\text{enter}}$.

- Set the scale on each axis using the setting the window.
- Press $\boxed{\text{menu}}$.
- Choose 4: Window/Zoom and then 1: Window Settings.

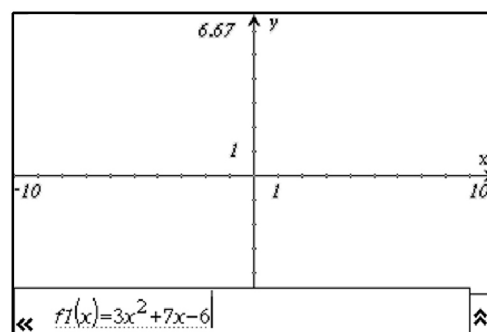


Figure 1

- Enter the information in Figure 2 for XMin, XMax, YMin, and YMax.

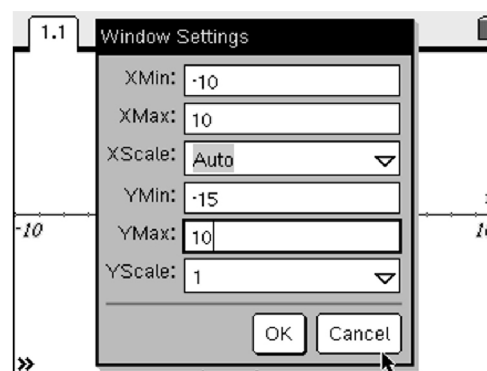


Figure 2

- The graph in Figure 3 for $y = 3x^2 + 7x - 6$ will result.

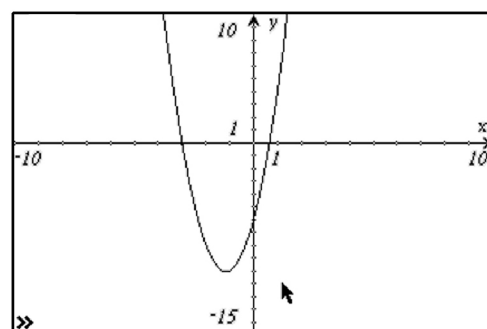


Figure 3



3. Find the y -intercept.

- Press **menu** and choose 5: Trace and choose 1: Graph Trace.
- Press 0 **enter** to find the y -value at $x = 0$. See Figure 4.

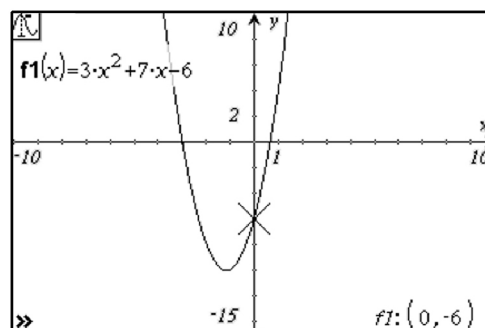


Figure 4

4. While you are still in trace mode, to find the minimum, use the arrow keys to move the cursor to the vertex. The handheld will indicate when you are at the minimum. See Figure 5.

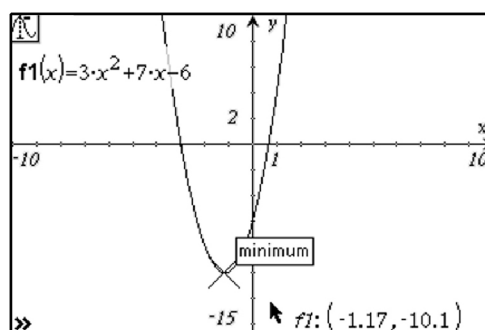


Figure 5

5. While you are still in trace mode, to find either zero, use the arrow keys to move the cursor to each x -intercept. The handheld will indicate when you are at a zero. See Figures 6 and 7.

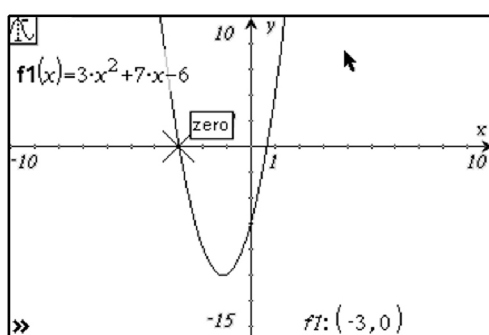


Figure 6

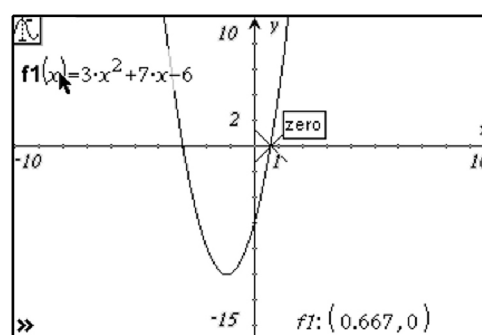


Figure 7

