Name: _____ Date: _____

How to Do Page 168 Example 2 Using TI-Nspire™ With Touchpad

Use TI-Nspire™ with Touchpad to graph function $h(t) = -490t^2 + 150t + 25$ and determine characteristics of the corresponding graph.

1. Press the home key and open 1: New Document and then 2: Add Graphs.
   • Enter the quadratic equation by pressing
   −490 X $\boxed{x^2}$ $\boxed{+}$ **150** X $\boxed{+}$ **25** $\boxed{\text{enter}}$ as shown
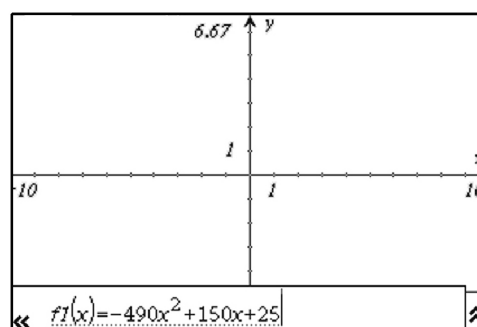   in Figure 1.

Figure 1

2. Choose an appropriate scale for each axis.
   • Press $\boxed{\text{esc}}$, so the cursor moves to the graphing area.
   • Use the arrows on the NavPad to move to a tick mark on the x-axis so that an open hand appears as in Figure 2.
   • Hold down the click button in the centre of the NavPad so that you see the hand icon change from opened to closed.
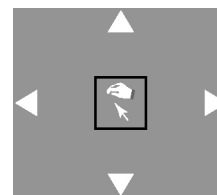

Figure 2

   • While holding down $\boxed{\text{⇧ shift}}$, drag the closed hand to the right. The x-axis scale will change.
   • Move the cursor far enough so the right x-intercept of the parabola is near the right side of the screen.
   • When you are finished adjusting the scale on the x-axis, press $\boxed{\text{esc}}$.
   • Move the cursor to a tick mark on the y-axis and similarly adjust the scale on the y-axis until you see the vertex of the parabola as in Figure 3.
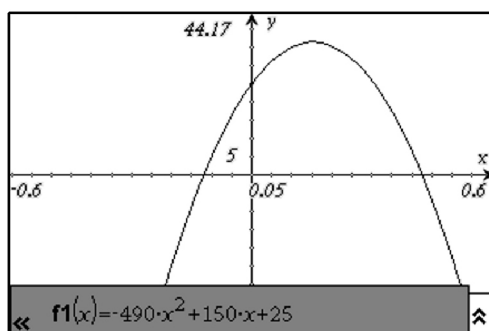

Figure 3

3. Find the *y*-intercept.
  • Press menu and choose 5: Trace.
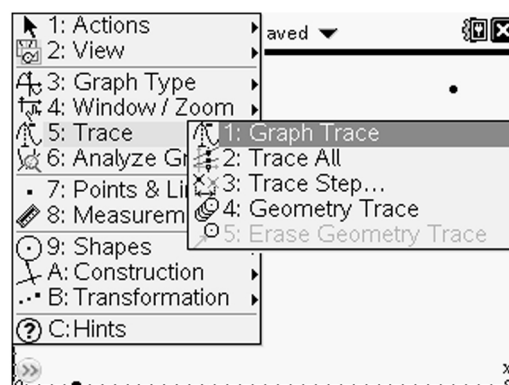 • Choose 1: Graph Trace as shown in Figure 4.

Figure 4
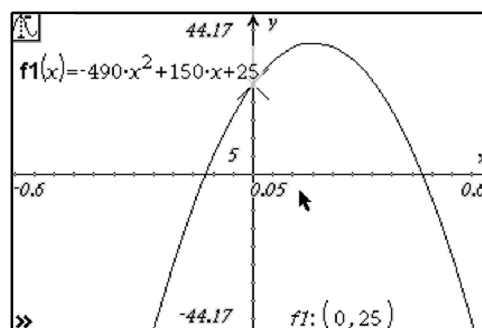
  • Press **0** enter to find the *y*-value at *x* = 0.

Figure 5

  • While still in trace mode, find the value of *y* at
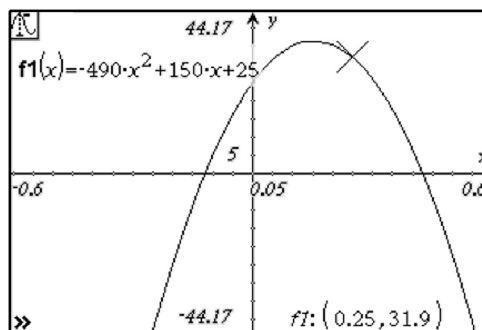   *x* = 0.25 by pressing **0.25** enter. See Figure 6.

Figure 6

- While still in trace mode, to find the maximum or zero, move the cursor to the appropriate part of the parabola. The handheld will indicate when you are at the maximum (Figure 7) or at a zero (Figure 8).
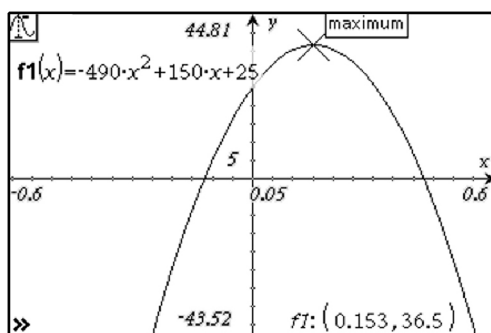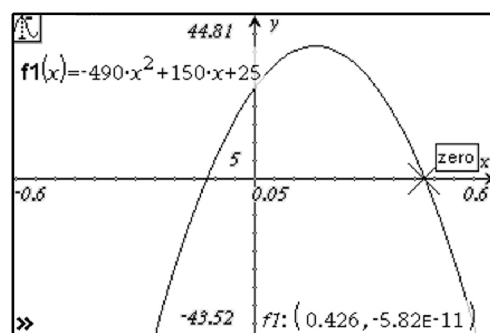

Figure 7

Figure 8