

How to Do Page 71 Example 4d) Using TI-Nspire™ With Touchpad

Use TI-Nspire™ with Touchpad to graph the function $s = 331.3\sqrt{1 + \frac{T}{273.15}}$.

1. Create a new document and graph.
 - Press the home key and choose 1: New Document. See Figure 1 below.
 - Select 2: Add Graphs. See Figure 2.

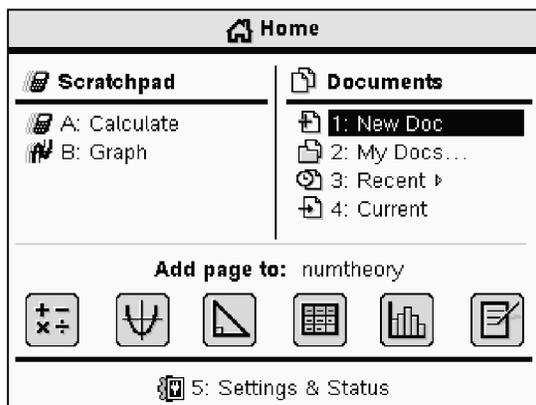


Figure 1

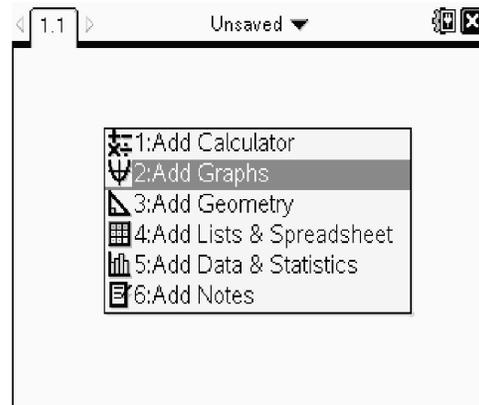


Figure 2

2. You can change the window, if you wish.
 - Press **[menu]** and then choose 4: Window and then 1: Window Settings as shown in Figure 3.

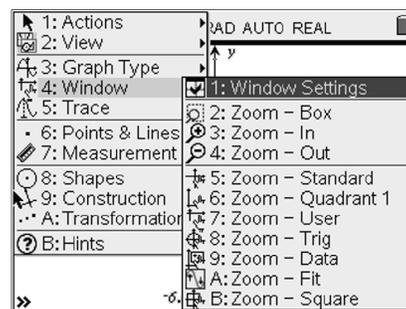


Figure 3



- Enter a possible window, such as the one in Figure 4.
 (Note: use **tab** to move between the rows.)

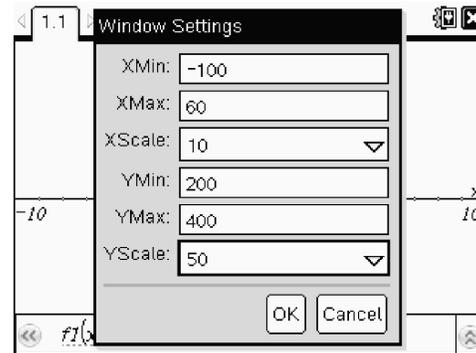


Figure 4

- Graph the function, $y = 331.3\sqrt{1 + \frac{x}{273.15}}$. You may want to round the decimals to whole numbers.
 - With the cursor in the entry line at the bottom of the screen, enter the following:
331 **ctrl** **x²** **1** **+** **X** **÷** **273** **)** as shown in Figure 5 below.
 - Press **enter** and you will see Figure 6. (Note: If the entry line is hidden, press **TAB**)

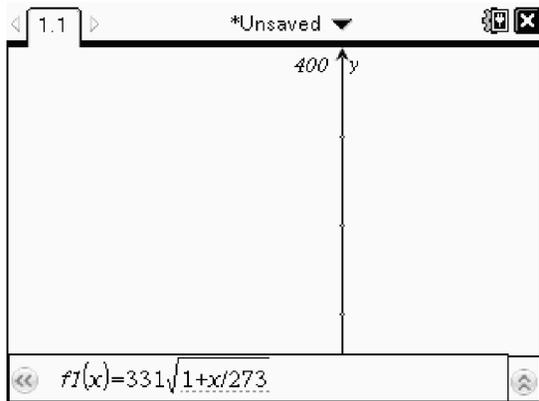


Figure 5

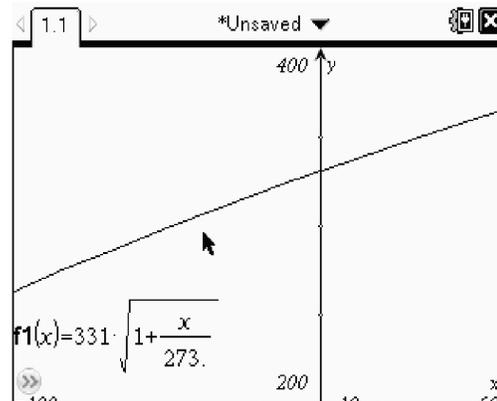


Figure 6

- Label the horizontal axis.
 - Press **menu**. Choose 1: Actions and then 6: Text. See Figure 7.
 - Using the navigation pad, move the cursor to the location you wish to label the horizontal axis.

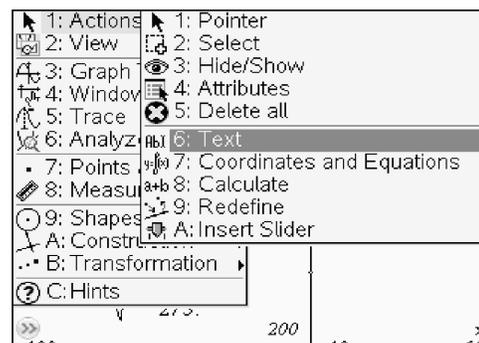


Figure 7



- Press **[enter]**. A text box will appear in which you can enter the label by pressing **[Shift]** **Temperature** **[]** **[(]** **[?]** **[!]** **[>]**. Then, select the degree symbol as shown in Figure 8. Press **[Shift]** **C** **[)]** **[enter]**. You will see Figure 9.

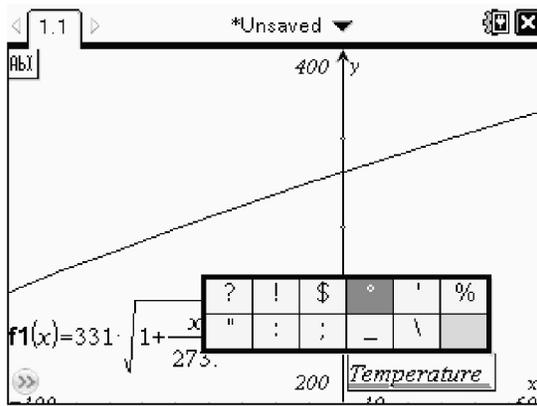


Figure 8

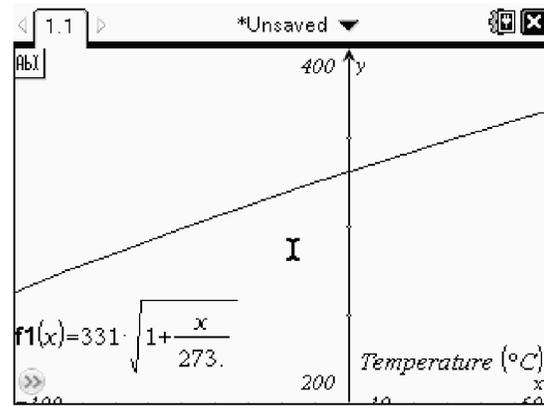


Figure 9

5. Label the vertical axis.

- The calculator is still in “text mode,” so using the navigation pad, move the cursor to the location you wish to label the vertical axis and press **[enter]**. A text box will appear.
- Enter the label by pressing **[Shift]** **Speed** **[of]** **[Shift]** **Sound** **[(]** **[m]** **[÷]** **[s]** **[)]** **[enter]**. You will see Figure 10.

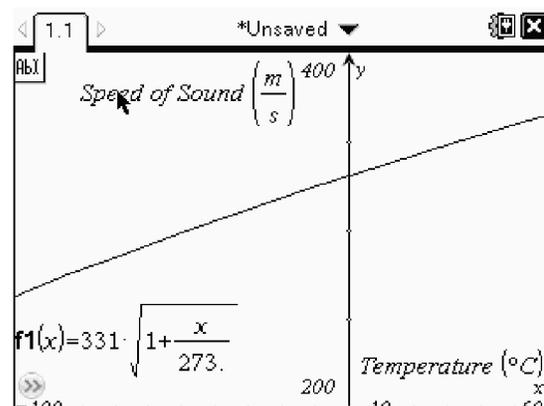


Figure 10

6. You can move or delete labels, if you wish.

- Exit the “text mode” by pressing **[esc]**.
- Using the navigation pad, move the cursor to the label you wish to move. Press **[ctrl]** and then press the centre of the navigation pad. You will notice that the hand now appears closed. Using the arrow keys, move the label to the desired location and press **[enter]**.
- To remove the label showing the equation, move the cursor to the label with the arrow keys. Then, highlight the label by pressing the centre of the navigation pad. Press **[del]**. See Figure 11.

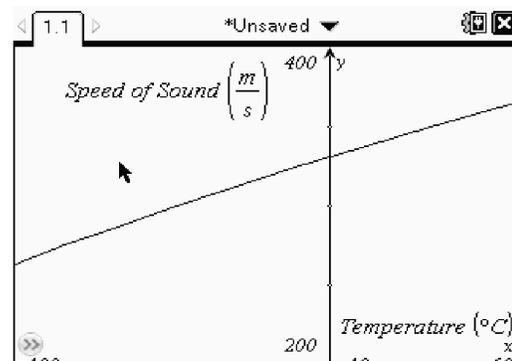


Figure 11

