

## How to Do Page 226 Example 2a) Using TI-83/84

Use a graphing calculator to graph  $y = 3 \sin x$ ,  $y = 0.5 \sin x$ , and  $y = -2 \sin x$  for  $0 \leq x \leq 2\pi$ .

1. Ensure that radian mode is selected.

- Press **[MODE]**.
- If “Radian” is highlighted, go to step 2. See Figure 1. Otherwise, use the arrow keys to move the cursor to “Radian” and press **[ENTER]**.

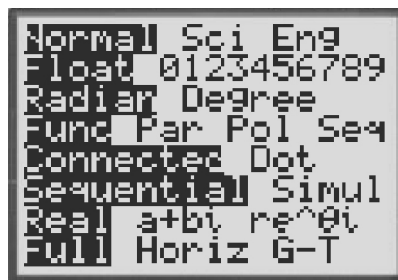


Figure 1

2. Enter the three functions in the Y = screen.

- Press **[Y=]**. If you wish to clear an entry line, move the cursor to the line and press **[CLEAR]** **[ENTER]**.
- Use one of the “Y=” lines for each function. See Figure 2.  
 For  $y = 3 \sin x$ , enter **3** **[SIN]** **[x,T,θ,n]** **[)]**.  
 For  $y = 0.5 \sin x$ , enter **0.5** **[SIN]** **[x,T,θ,n]** **[)]**.  
 For  $y = -2 \sin x$ , enter **(-)** **2** **[SIN]** **[x,T,θ,n]** **[)]**.

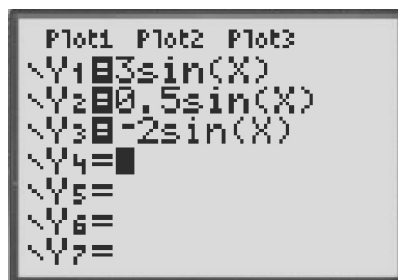


Figure 2

3. Enter a window and then graph the functions.

- Press **[WINDOW]**. A possible window is shown in Figure 3.  
 (Note:  $X_{\max} = 2\pi$ : enter **2** **[2nd]** **[π]**.  
 $X_{\text{scl}} = \frac{\pi}{4}$ : enter **[2nd]** **[π]** **[÷]** **4**.)

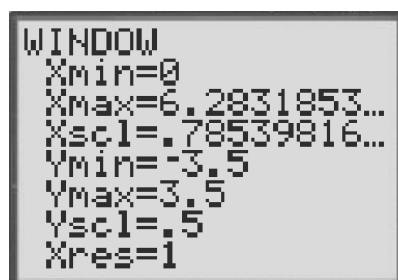


Figure 3

- Press **[GRAPH]**. You will see Figure 4.

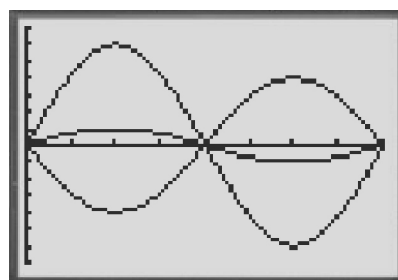


Figure 4



Name: \_\_\_\_\_

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**TM 5-1**  
(continued)

4. You may find it helpful to graph  $y = -2 \sin x$  with a thick line. See Figures 5 and 6 below.
- Press **Y=**. Using the arrow keys, move the cursor to the far left of the line containing the function  $y = -2 \sin x$ . Press **ENTER**. The segment on the far left will now appear thick.

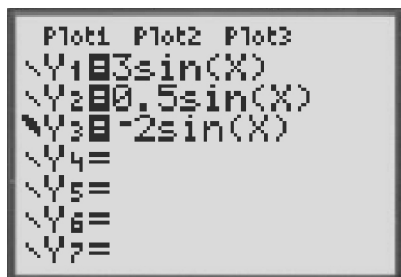


Figure 5

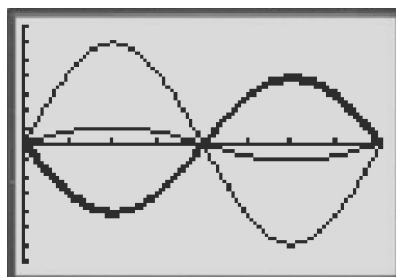


Figure 6

