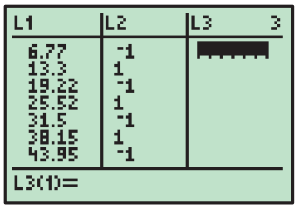
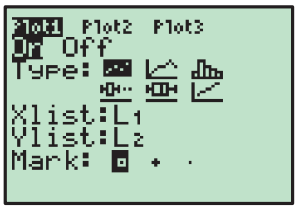
CHAPTER 10 - MODELLING USING SINE FUNCTIONS

TI-84 Plus

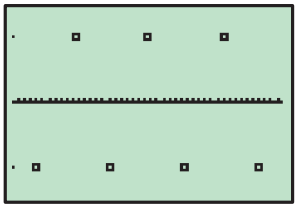
Step 1 Enter the times in hours after midnight into $\mathbf{L_1}$ and the corresponding tide levels (-1 for low tide and 1 for high tide) into $\mathbf{L_2}$.



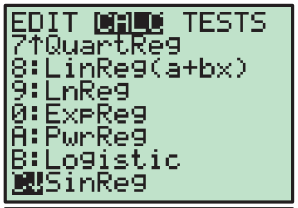
Step 2 Press 2nd Y= (**STAT PLOT**) **1** and ensure **Plot1** is set up as shown.



Step 3 Press ZOOM **9:ZoomStat** to draw the graph.

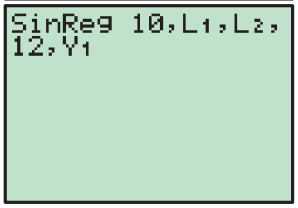


Step 4 Press STAT ► to select the **STAT CALC** menu, then select **C:SinReg**.



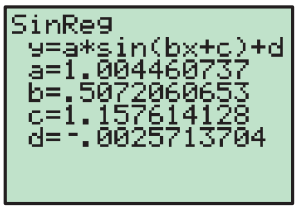
Step 5 The syntax of the **SinReg** command is *SinReg(iterations, x data, y data, period guess, y variable)*.

Press 10 , 2nd **1** ($\mathbf{L_1}$) , 2nd **2** ($\mathbf{L_2}$) , 12 , VARS ► to select the **Y-VARS** menu, then **1** to select **1:Function**, then **1** to select **1:$\mathbf{Y_1}$**.



Step 6 Press ENTER to find the equation of the sine model.

Press MODE and ensure the calculator is in **radian** mode.



Step 7 Press ZOOM **9:ZoomStat** to plot the sine curve over the data.