

B-14 Graphing Trigonometric Functions

You can graph trigonometric functions in degree measure using the TI-83 Plus or TI-84 calculators. Graph the function $y = \sin x$ for $0^\circ \leq x \leq 360^\circ$.

1. Put the calculator in degree mode.

Press **MODE**. Scroll down and across to **Degree**. Press **ENTER**.

2. Enter $y = \sin x$ into the equation editor.

Press **Y=** **SIN** **X, T, θ , n** **)**.

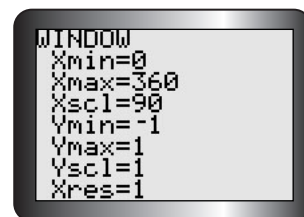
3. Adjust the window to correspond to the given domain.

Press **WINDOW**. Set **Xmin** = 0, **Xmax** = 360, and **Xscl** = 90. These settings display the graph from 0° to 360° , using an interval of 90° on the x -axis. In this case, set **Ymin** = -1 and **Ymax** = 1, since the sine function lies between these values. However, if this fact is not known, this step can be omitted.

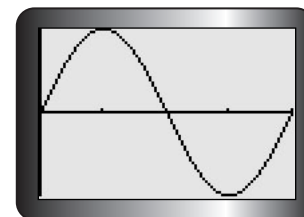
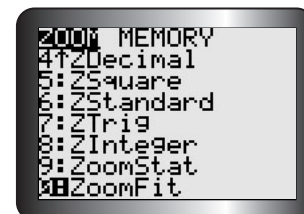
4. Graph the function using ZoomFit.

Press **ZOOM** **0**. The graph is displayed over the domain and the calculator determines the best values to use for **Ymax** and **Ymin** in the display window.

Note: You can use **ZoomTrig** (press **ZOOM** **7**) to graph the function in step 4. **ZoomTrig** will always display the graph in a window where **Xmin** = -360° , **Xmax** = 360° , **Ymin** = -4, and **Ymax** = 4.



step 3



step 4

B-15 Evaluating Powers and Roots

1. Evaluate the power $(5.3)^2$.

Press **5** **.** **3** **x²** **ENTER**.

2. Evaluate the power 7^5 .

Press **7** **^** **5** **ENTER**.

3. Evaluate the power $8^{-\frac{2}{3}}$.

Press **8** **^** **(** **-** **2** **÷** **3** **)** **ENTER**.

4. Evaluate the square root of 46.1.

Press **2nd** **x²** **4** **6** **.** **1** **)** **ENTER**.

5. Evaluate $\sqrt[4]{256}$.

Press **4** **MATH** **5** **2** **5** **6** **ENTER**.

