

Graphing Calculator Lab

Graphing Relationships

TI-73 Explorer

Main IDEA

Use technology to graph relationships involving conversions of measurement.

You can use a TI-73 Explorer graphing calculator to graph relationships.

ACTIVITY

1 MEASUREMENT Use the table at the right to write a function that relates the number of yards x to the number of feet y . Then graph your function.

Yards (x)	Feet (y)
1	3
2	6
3	9
4	12

STEP 1 By examining the table, you can see that the number of feet is 3 times the number of yards. Write a function.

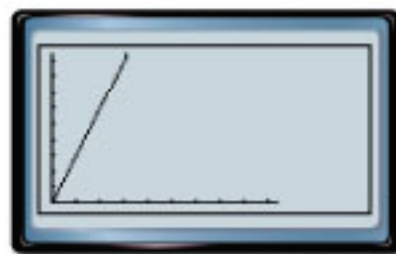
The number of feet y is 3 times the number of yards x .

$$y = 3x$$

STEP 2 Press Y= and enter the function $y = 3x$ into Y_1 .

STEP 3 Adjust your viewing window. Press WINDOW and change the values to reflect the range of values in the table.

STEP 4 Finally, graph the function by pressing GRAPH .



ANALYZE THE RESULTS

1. Test the function above using one of the values from the table and the CALC feature on your calculator. Press 2nd [CALC] 1 and then enter an x -value of 3. What y -value is displayed? What do each of these values represent and how are they represented on the graph?
2. Use your graph to convert 7 yards into feet. Explain your method.
3. **MAKE A CONJECTURE** Write a function that could be used to convert feet into yards. What is an appropriate window for a graph of this function? Graph and test your function.
4. Use your function from Exercise 3 to convert 16 feet into yards.
5. Write a function that could be used to convert 36 ounces to pounds. Indicate an appropriate window, then use a graph of the function to convert 36 ounces to pounds. (Hint: 1 pound = 16 ounces)