



Inverse Variation

Student Activity

Name _____

Class _____

Enter the data from the table above into lists.

x	y
1	24
2	12
3	8
4	6
5	4.8
6	4

Press **[STAT]** **[ENTER]**. Enter the x column in **L1** and the y column in **L2** as shown.

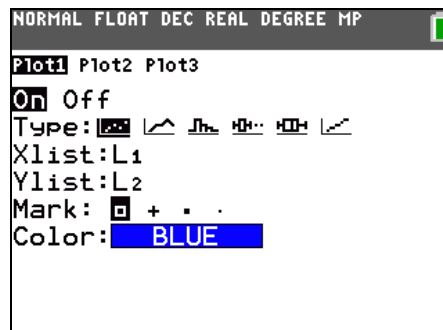
Press **[2nd]** **[STAT PLOT]** and select **Plot1**.

Press **[ENTER]** to turn the plot **On**. Select **scatter** as the type of plot, **L1** for the Xlist, and **L2** for the Ylist.

Press **[WINDOW]**. Set the window to the following:

Xmin = 0, Xmax = 10, Xscl = 2

Ymin = 0, Ymax = 25, Yscl = 5



Press **[GRAPH]**.

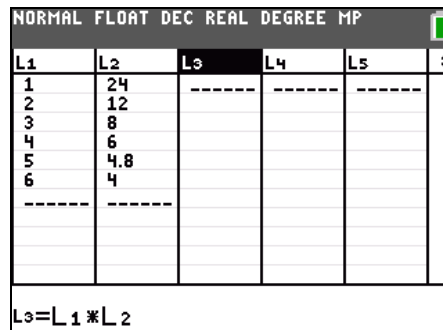
- How would you describe the relationship between x and y by examining this data?

Press **[STAT]** **[ENTER]** to return to the lists.

- What relationships can you see by examining the numbers in the lists?

- What is the product of each pair of numbers?

Arrow to the top of **L3**. Enter a formula to multiply the entries in **L1** by the entries in **L2**. Press **[2nd]** **[L1]** for **L1** and press **[2nd]** **[L2]** for **L2**.





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Press **WINDOW**. Set the window as shown to examine the graph when x is negative.

Press **GRAPH**.

- What appears to be happening when $x = 0$?

```
NORMAL FLOAT DEC REAL DEGREE MP
WINDOW
Xmin=-10
Xmax=10
Xscl=2
Ymin=-25
Ymax=25
Yscl=5
Xres=1
ΔX=.07575757575757
TraceStep=.15151515151515
```

- Why does the graph of the equation not appear in Quadrants II or IV?
- Do you think an inverse variation can ever be found in Quadrants II or IV? Why?
- Does this graph appear to be a function now? Explain.