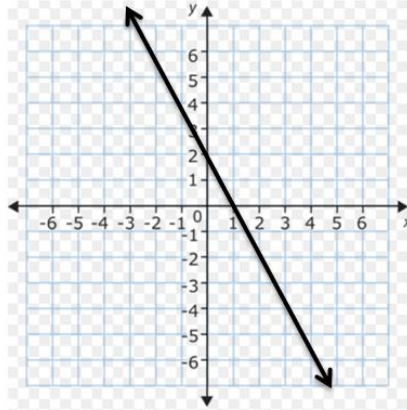


Possible Solutions

Write an equation that can be used to describe the relationship between x and y shown in the graph below.



Possible Solution 1

- To write the equation of a line, the slope and the y -intercept must be known.
- The slope of the line is a negative slope since it is decreasing from left to right.
- By counting from one point on the line to another, a student can determine the slope of the line is -2 , since going down 2 units and over to the right 1 unit will land on the next point in the graph as you go from left to right.
- The y -intercept is 2 because the line crosses the y -axis at $(0, 2)$.
- Therefore the equation is $y = -2x + 2$.

Possible Solution 2

- To write the equation for a line, the slope and y -intercept must be known. A student can make a table of points from the graph.

	x	y	
+1	-1	4	-2
+1	0	2	-2
+1	1	0	-2
	2	-2	

- From the table, determine the slope (constant rate of change) is -2 , since slope is the change in y (-2) divided by the change in x (1). The y -intercept is 2

because the point (0, 2) is where the line crosses the y -axis. Therefore, the equation is $y = -2x + 2$.

Possible Solution 3

- To write the equation for a line, the slope and y -intercept must be known.
- Make a table of points from the graph, and then use the calculator to find the equation.

x	y
-1	4
0	2
1	0
2	-2

- Press the STAT key on the graphing calculator and then press ENTER.
- Enter the x values in L_1 and the y values in L_2 .
- Next, press 2ND MODE to return to the home screen.
- Then press STAT and arrow over to CALC.
- Select LINREG from the menu.
- Press ENTER until the equation is shown.