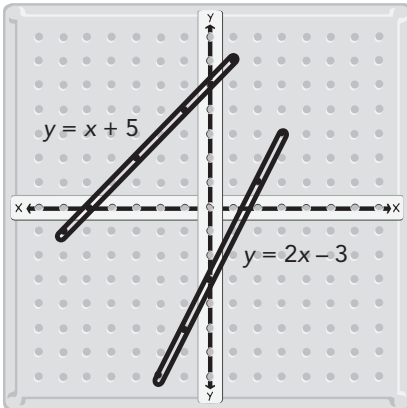


Use an XY Coordinate Pegboard to graph each line.
Make a table of ordered pairs for each line.

1.



$$y = x + 5$$

x					
y					

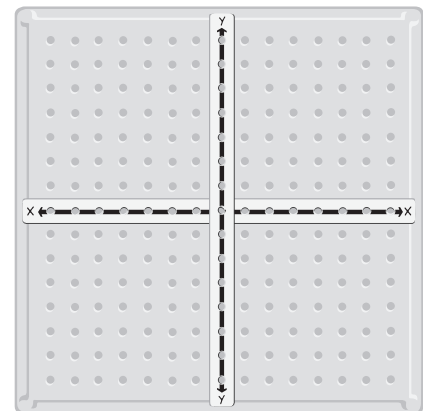
$$y = 2x - 3$$

x					
y					

Using an XY Coordinate Pegboard, graph the line on a coordinate plane. Make a table of ordered pairs for the line.

2. $y = 3x - 1$

x					
y					



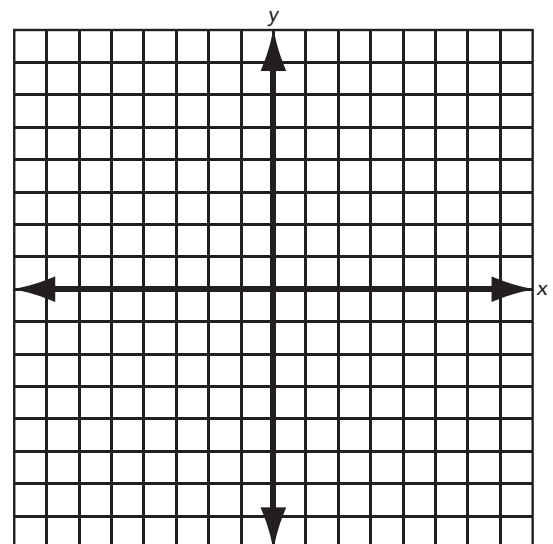
Make a table of ordered pairs for each equation. Graph and label each line on the coordinate plane.

3. $y = 2x$

x					
y					

4. $y = x + 4$

x					
y					

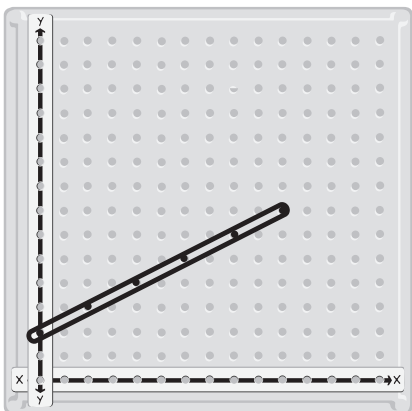


Challenge! Use the equations $y = x - 1$ and $y = x^2 - 3$ to show how two points can be on the graph of a linear equation and also on the graph of a nonlinear equation.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Use an XY Coordinate Pegboard to model the graph of the function. Make a table of the ordered pairs. Is the function linear? Write yes or no.

1.

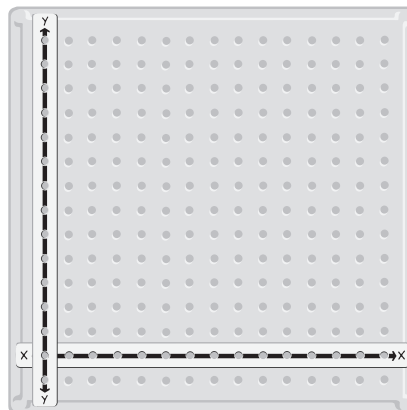


x	y
0	2

Using an XY Coordinate Pegboard, graph the function. Sketch the graph of the function. Is the function linear? Write yes or no.

2.

x	y
0	4
1	5
2	7
3	9
2	1
4	5



Determine if each function is linear. Write yes or no.

3.

x	y
1	2
3	4
5	6
7	8
9	11
11	13

4.

x	y
4	1
1	4
5	2
2	5
6	3
3	6

5.

x	y
0	3
1	3
2	3
3	3
2	3
4	3

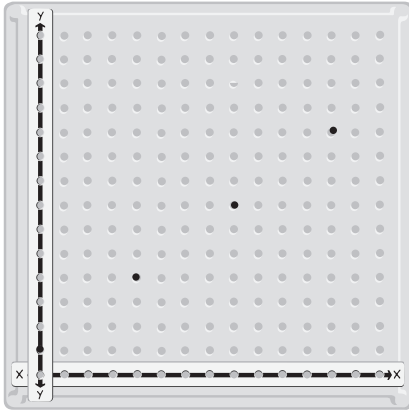
Name _____

Challenge! How can you determine without graphing a set of ordered pairs if the set of ordered pairs models a linear function? Show an example.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

Use an XY Coordinate Pegboard to plot the ordered pairs. Make a table.
Write the equation of the line in the form $y = mx + b$.

1.



x	y

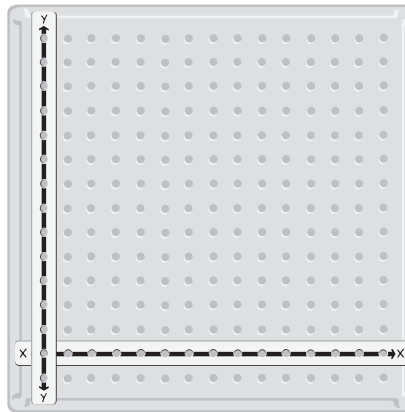
$m =$ _____

$b =$ _____

Using an XY Coordinate Pegboard, model the line that contains the ordered pairs in the table. Sketch the model. Write the equation of the line in the form $y = mx + b$.

2.

x	y
0	1
1	4
2	7
3	10
4	13

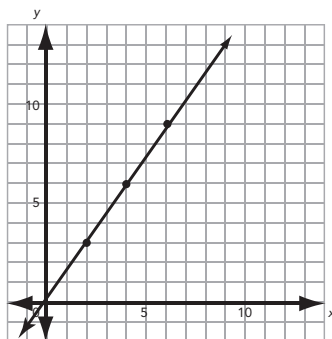


$m =$ _____

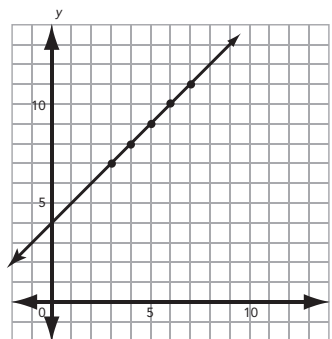
$b =$ _____

Write the equation of each line in the form $y = mx + b$.

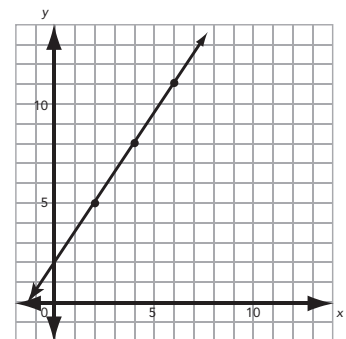
3.



4.



5.

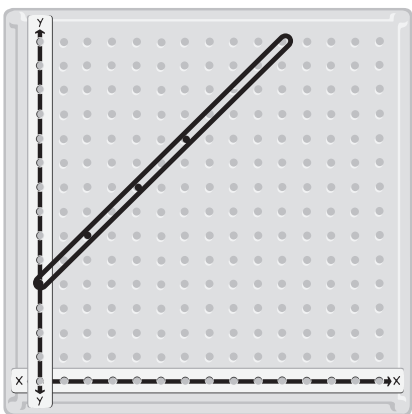


Challenge! Describe how to graph a line if all you know are the slope and y-intercept of the line. Draw a picture to help.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Use an XY Coordinate Pegboard to graph the line shown on the grid. Make a table of ordered pairs for six points on the line. Write an equation for the line in the form $y = mx + b$.

1.

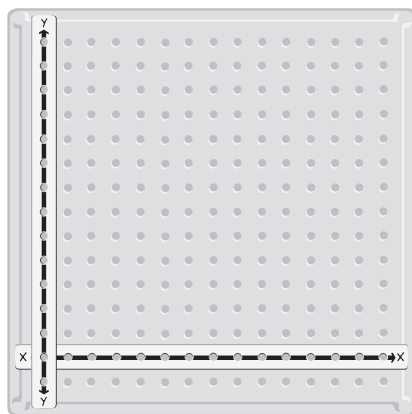


x	y

$y =$ _____

Using an XY Coordinate Pegboard, graph the line for the equation given. Sketch the model. Make a table of ordered pairs for the line.

2. $y = \frac{1}{2}x + 3$



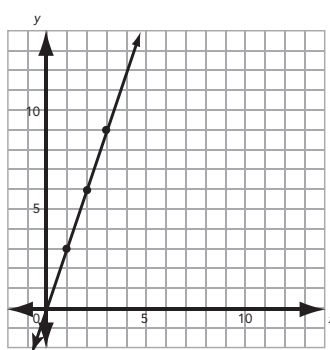
x	y

Match each representation in the top row with its equation.

3.

x	y
0	1
1	2
2	3
3	4
4	5

4.



5.

x	y
0	1
2	5
4	9
6	13
8	17

a. $y = x + 1$

b. $y = 2x + 1$

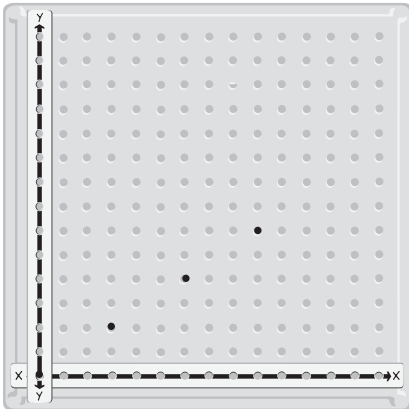
c. $y = 3x$

Challenge! For Questions 3 and 5, what information for the equation did you get directly from the table and what information did you have to make a calculation to find? Explain.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Use an XY Coordinate Pegboard to model the line determined by the points shown on the grid. Write the equation for the line. Answer each question.

1.



equation: _____

What is the ordered pair for the point on the line when $x = 30$? _____

What is the ordered pair for the point on the line when $x = 90$? _____

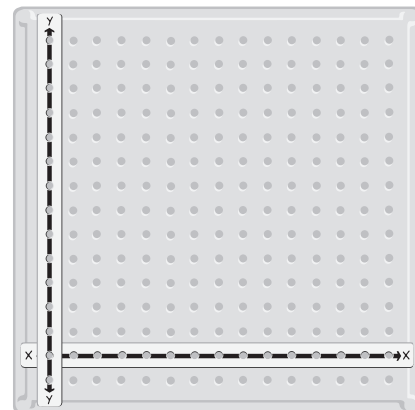
Using an XY Coordinate Pegboard, model the line determined by the ordered pairs given. Write an equation for the line. Answer each question.

2. $(0, 2)$, $(1, 6)$, and $(3, 14)$

equation: _____

What is the ordered pair for the point on the line when $x = 2$? _____

What is the ordered pair for the point on the line when $x = 6$? _____



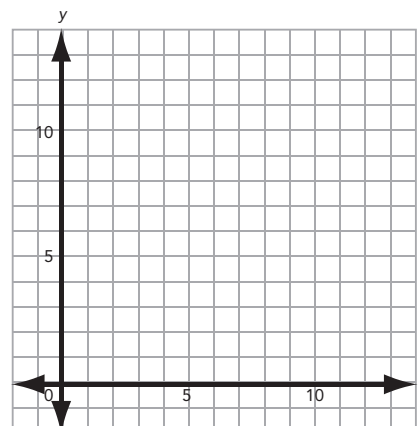
Graph the line that passes through the given points. Write the equation of the line. Answer each question.

3. $(0, 1)$, $(2, 2)$, and $(4, 3)$

equation: _____

What is the ordered pair for the point on the line when $x = 6$? _____

What is the ordered pair for the point on the line when $x = 20$? _____



Challenge! What information do you need to write the equation for a line? After you have the equation, how can you find additional points on the line when given a value for x ?

[illegible]