Represent Linear Equations with Graphs

y = mx + b

Drawing a graph for a linear equation: You can find ordered pairs for a graph by making a table of values.

Example #1: Draw a graph of y = 2x – 4

Step 1: Make a table by using -3, -2, -1, 0, 1, 2, and 3 for x to calculate y-values (if the point that you create is off the given graph, choose another x-value and create a different ordered pair)

Step 2: Plot the ordered pairs that your table creates.

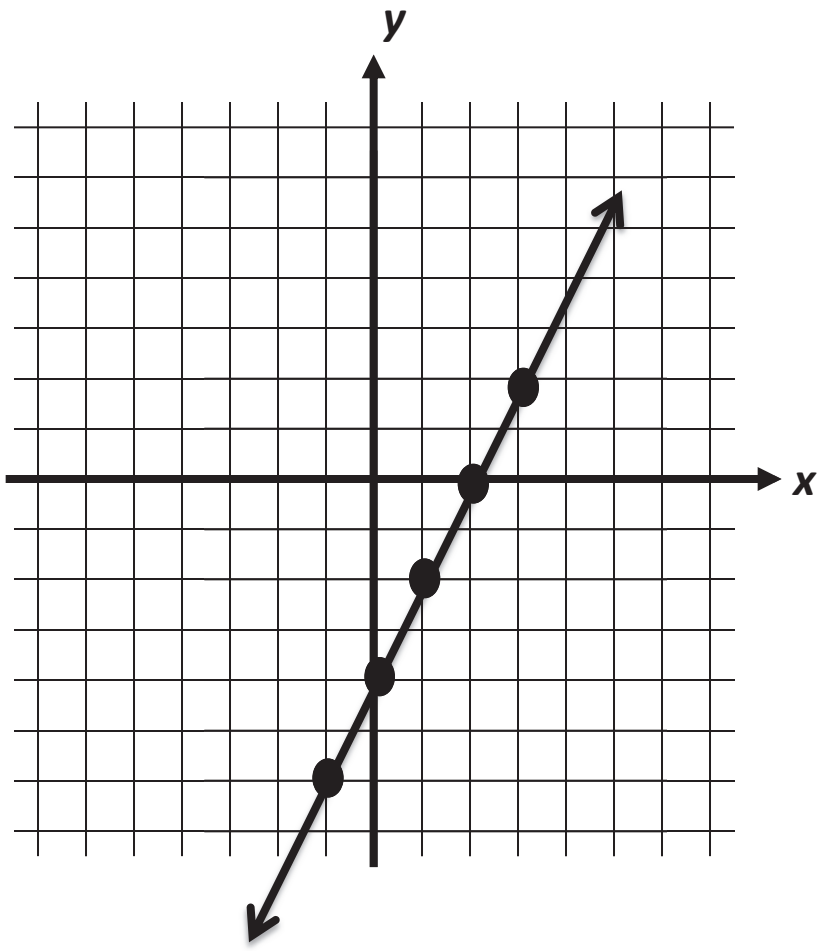
$$y = 2x - 4$$

x	y = mx + b	y
-3	y = 2(-3) – 4	-10
-2	y = 2(-2) – 4	-8
-1	y = 2(-1) – 4	-6
0	y = 2(0) – 4	-4
1	y = 2(1) – 4	-2
2	y = 2(2) – 4	0
3	y = 2(3) – 4	2

The ordered pairs for the graph are

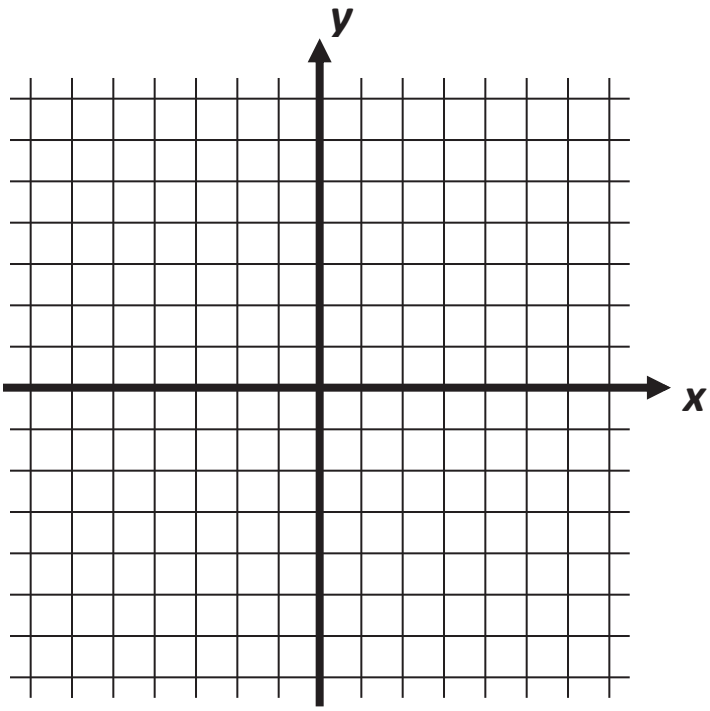
(-3,-10), (-2,-8), (-1,-6), (0,-4), (1,-2),

(2,0) and (3,2)

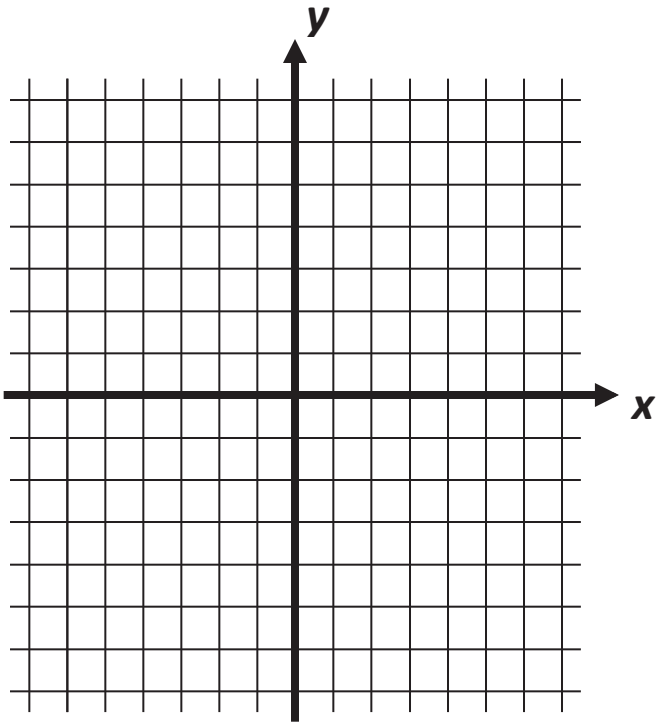


Create a table of values and draw a graph for the linear equation.

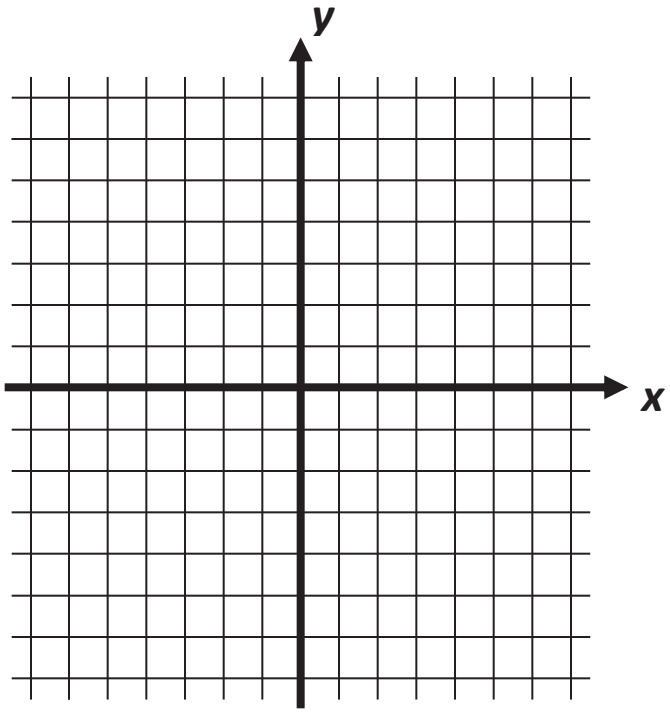
1. $y = 3x - 5$



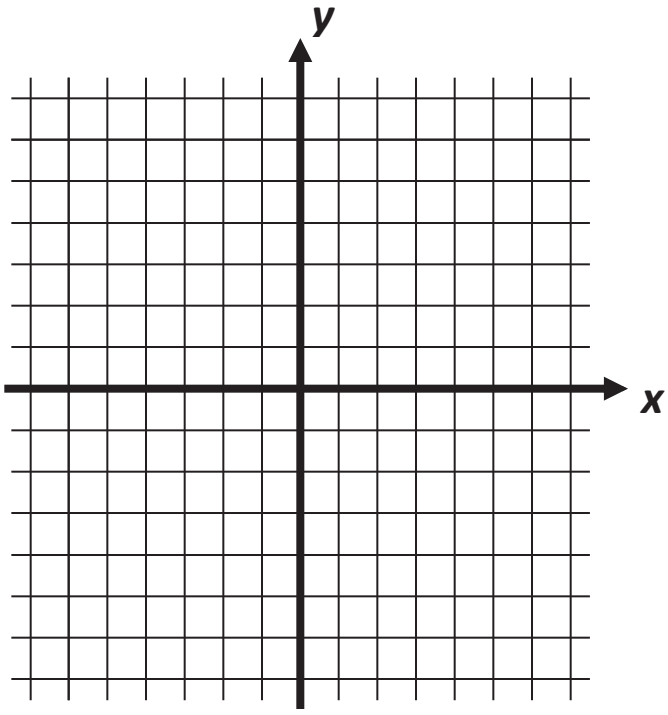
2. $y = -\frac{1}{2}x - 3$



3. $y = -2x - 5$

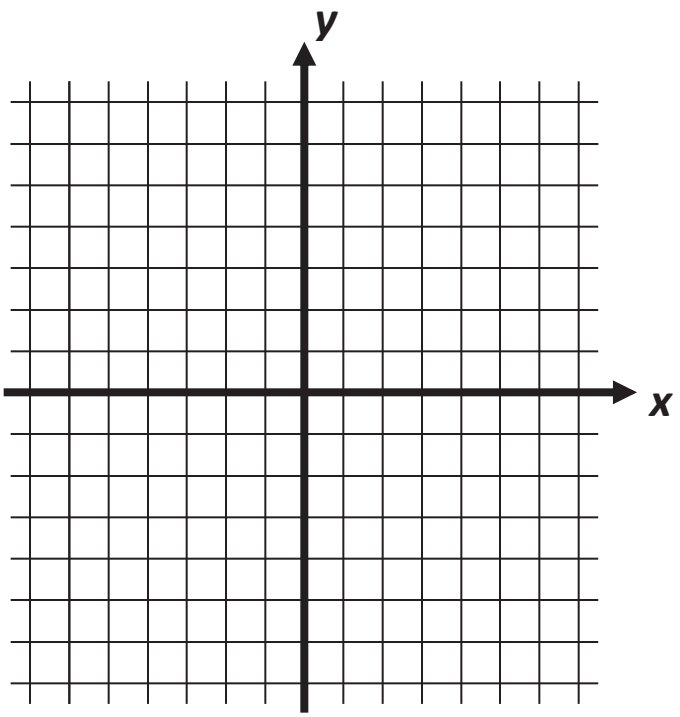


4. $y = \frac{2}{3}x - 3$

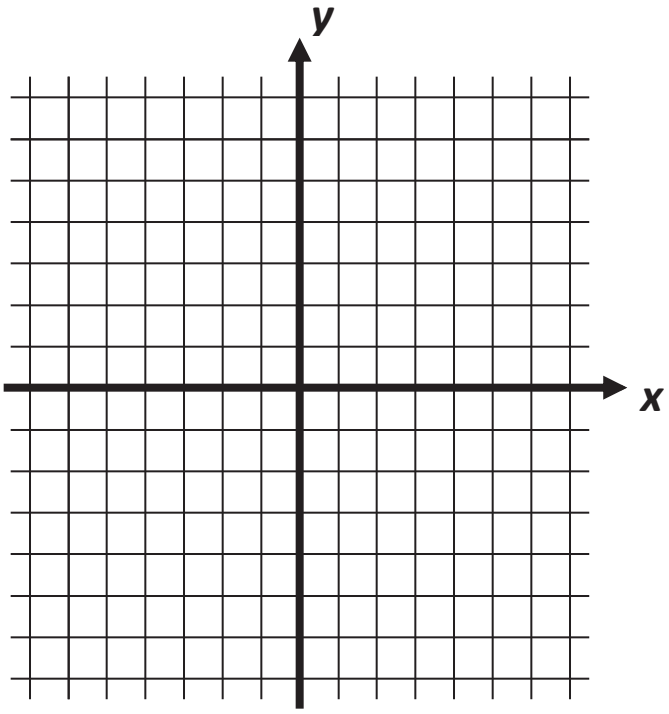


Create a table of values and draw a graph for the linear equation.

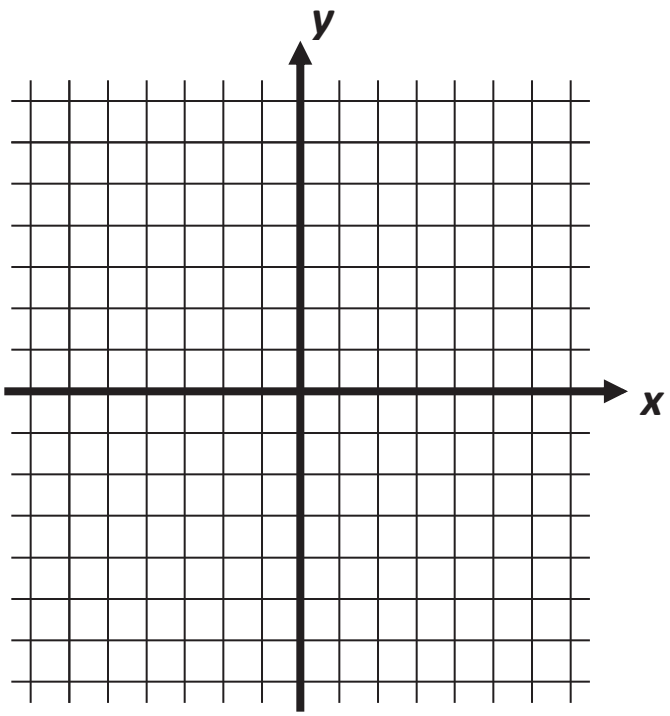
5. $y = -x + 4$



6. $y = 5$



7. $x = -2$



8. $y = x$