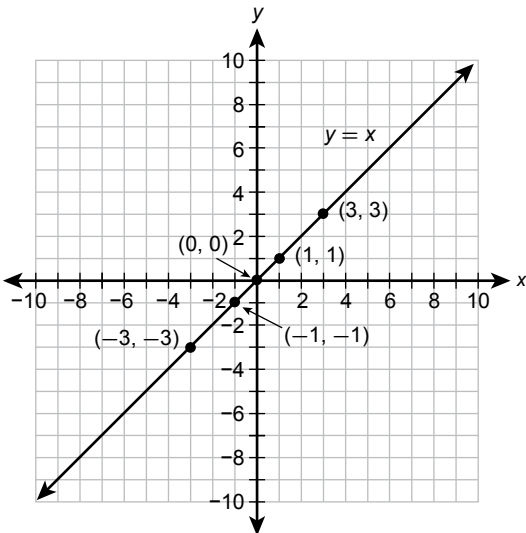


# Simple Linear Graphs

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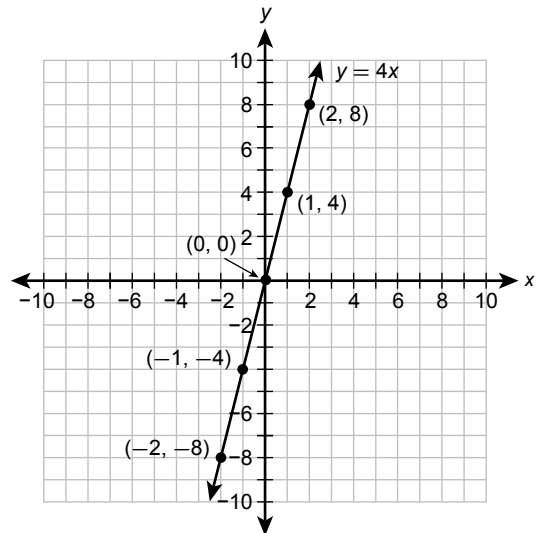
1.

$x$	$y = x$	$(x, y)$
-3	$y = -3$	$(-3, -3)$
-1	$y = -1$	$(-1, -1)$
0	$y = 0$	$(0, 0)$
1	$y = 1$	$(1, 1)$
3	$y = 3$	$(3, 3)$



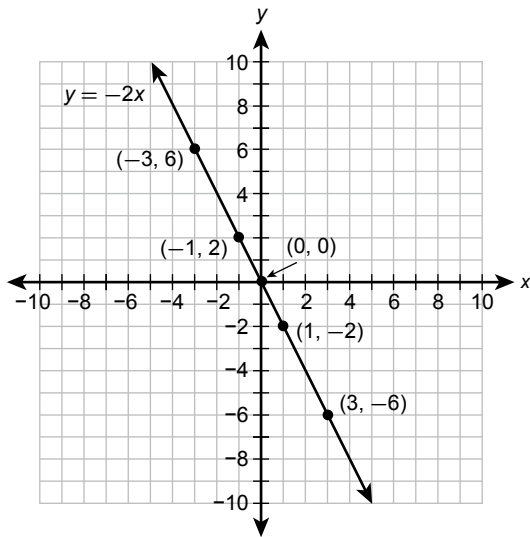
2.

$x$	$y = 4x$	$(x, y)$
-2	$y = 4 \cdot (-2) = -8$	$(-2, -8)$
-1	$y = 4 \cdot (-1) = -4$	$(-1, -4)$
0	$y = 4 \cdot 0 = 0$	$(0, 0)$
1	$y = 4 \cdot 1 = 4$	$(1, 4)$
2	$y = 4 \cdot 2 = 8$	$(2, 8)$



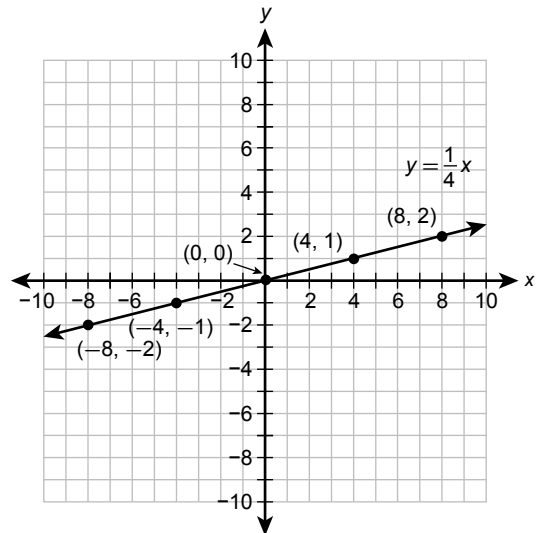
3.

$x$	$y = -2x$	$(x, y)$
-3	$y = -2 \cdot (-3) = 6$	$(-3, 6)$
-1	$y = -2 \cdot (-1) = 2$	$(-1, 2)$
0	$y = -2 \cdot 0 = 0$	$(0, 0)$
1	$y = -2 \cdot 1 = -2$	$(1, -2)$
3	$y = -2 \cdot 3 = -6$	$(3, -6)$



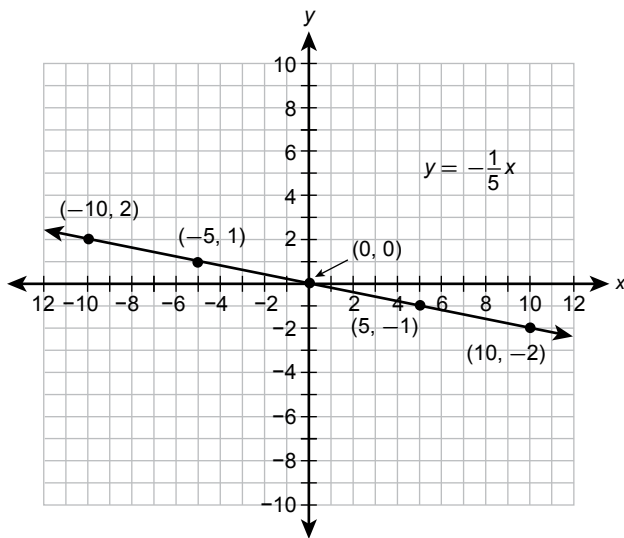
4.

$x$	$y = \frac{1}{4}x$	$(x, y)$
-8	$y = \frac{1}{4} \cdot (-8) = -2$	$(-8, -2)$
-4	$y = \frac{1}{4} \cdot (-4) = -1$	$(-4, -1)$
0	$y = \frac{1}{4} \cdot 0 = 0$	$(0, 0)$
4	$y = \frac{1}{4} \cdot 4 = 1$	$(4, 1)$
8	$y = \frac{1}{4} \cdot 8 = 2$	$(8, 2)$



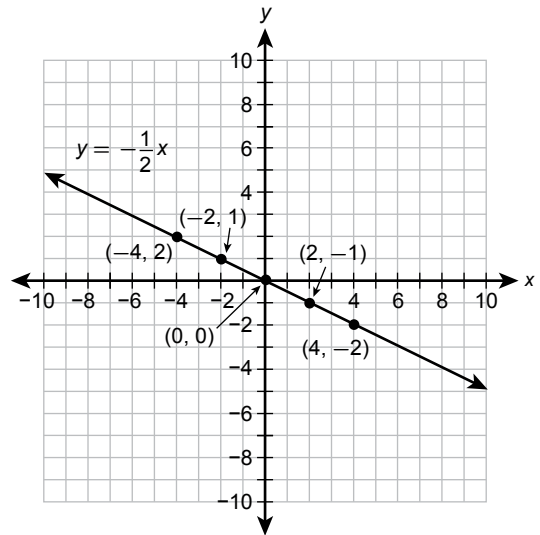
5.

$x$	$y = -\frac{1}{5}x$	$(x, y)$
-10	$y = -\frac{1}{5} \cdot (-10) = 2$	$(-10, 2)$
-5	$y = -\frac{1}{5} \cdot (-5) = 1$	$(-5, 1)$
0	$y = -\frac{1}{5} \cdot 0 = 0$	$(0, 0)$
5	$y = -\frac{1}{5} \cdot 5 = -1$	$(5, -1)$
10	$y = -\frac{1}{5} \cdot 10 = -2$	$(10, -2)$



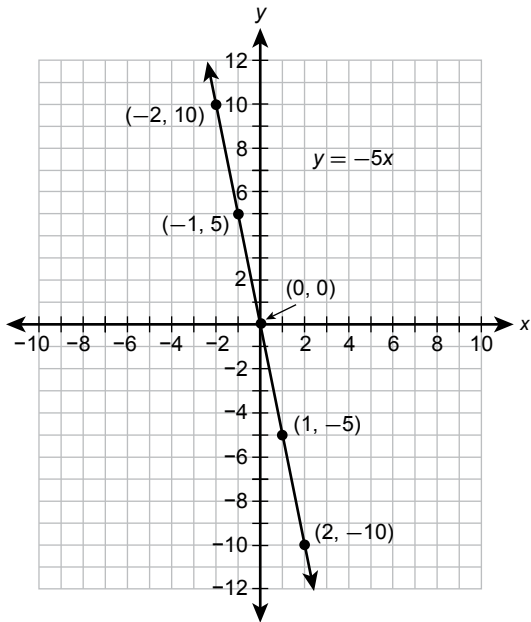
6.

$x$	$y = -\frac{1}{2}x$	$(x, y)$
-4	$y = -\frac{1}{2} \cdot (-4) = 2$	$(-4, 2)$
-2	$y = -\frac{1}{2} \cdot (-2) = 1$	$(-2, 1)$
0	$y = -\frac{1}{2} \cdot 0 = 0$	$(0, 0)$
2	$y = -\frac{1}{2} \cdot 2 = -1$	$(2, -1)$
4	$y = -\frac{1}{2} \cdot 4 = -2$	$(4, -2)$



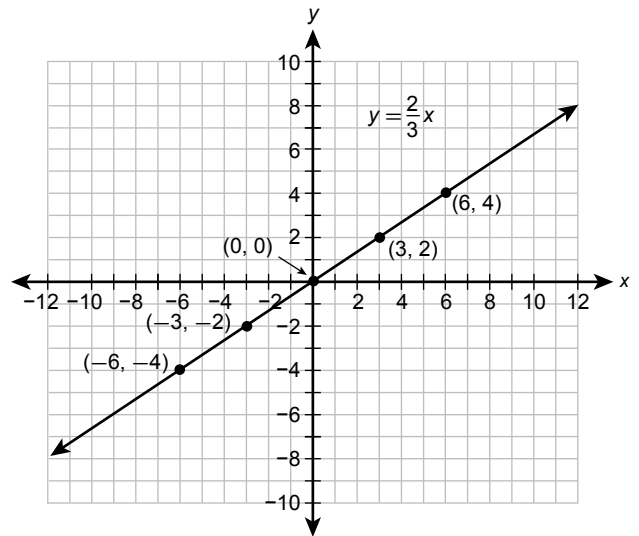
7.

$x$	$y = -5x$	$(x, y)$
-2	$y = -5 \cdot (-2) = 10$	$(-2, 10)$
-1	$y = -5 \cdot (-1) = 5$	$(-1, 5)$
0	$y = -5 \cdot 0 = 0$	$(0, 0)$
1	$y = -5 \cdot 1 = -5$	$(1, -5)$
2	$y = -5 \cdot 2 = -10$	$(2, -10)$



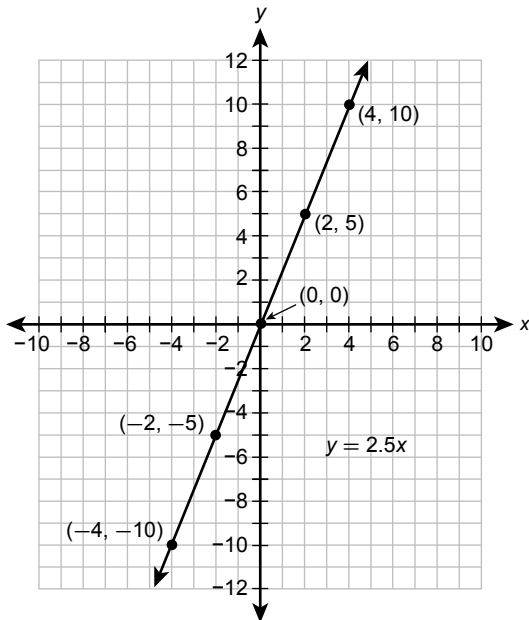
8.

$x$	$y = \frac{2}{3}x$	$(x, y)$
-6	$y = \frac{2}{3} \cdot (-6) = -4$	$(-6, -4)$
-3	$y = \frac{2}{3} \cdot (-3) = -2$	$(-3, -2)$
0	$y = \frac{2}{3} \cdot 0 = 0$	$(0, 0)$
3	$y = \frac{2}{3} \cdot 3 = 2$	$(3, 2)$
6	$y = \frac{2}{3} \cdot 6 = 4$	$(6, 4)$

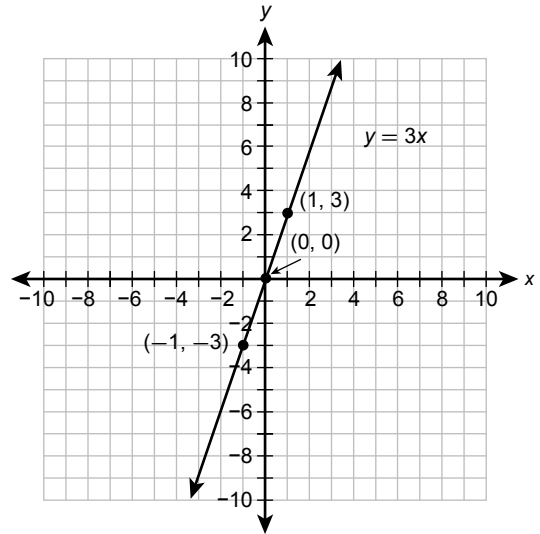


9.

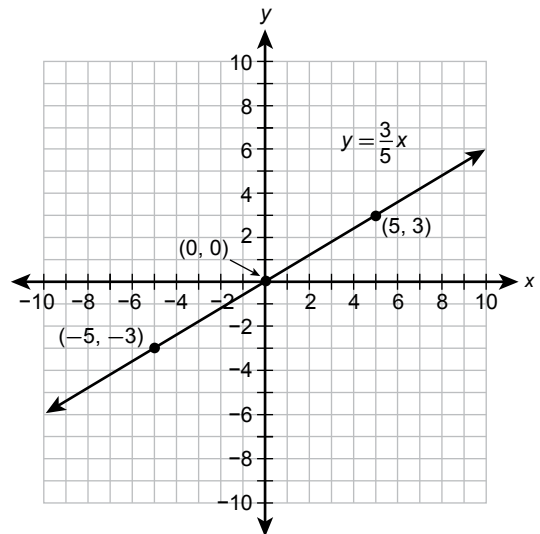
$x$	$y = 2.5x$	$(x, y)$
-4	$y = 2.5 \cdot (-4) = -10$	$(-4, -10)$
-2	$y = 2.5 \cdot (-2) = -5$	$(-2, -5)$
0	$y = 2.5 \cdot 0 = 0$	$(0, 0)$
2	$y = 2.5 \cdot 2 = 5$	$(2, 5)$
4	$y = 2.5 \cdot 4 = 10$	$(4, 10)$



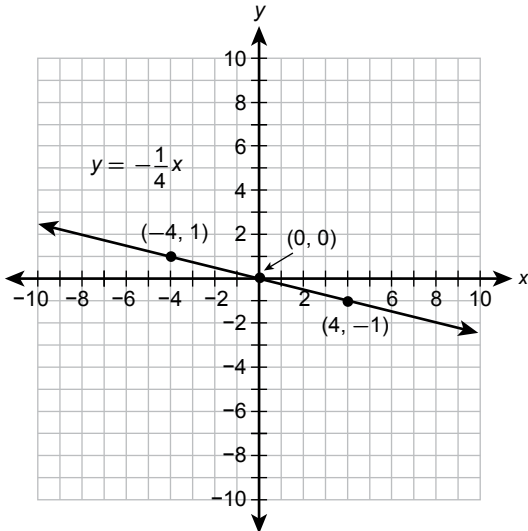
10. The slope is 3. Plot the point  $(0, 0)$ . Beginning at the origin, move 3 units up and 1 unit to the right, then plot the point  $(1, 3)$ . Beginning at the origin, move 3 units down and 1 unit to the left, then plot the point  $(-1, -3)$ . Draw the line through the points.



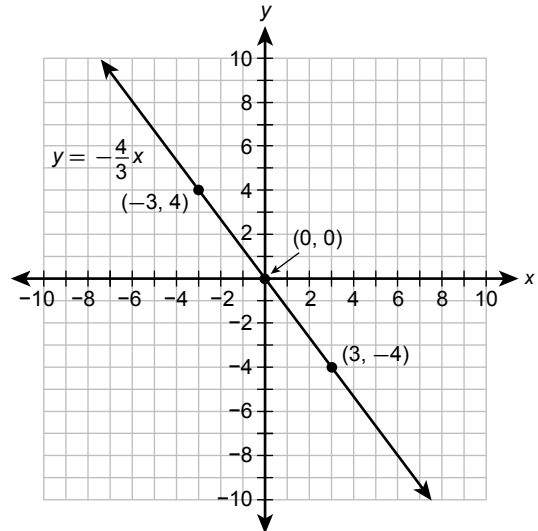
11. The slope is  $\frac{3}{5}$ . Plot the point  $(0, 0)$ . Beginning at the origin, move 3 units up and 5 units to the right, then plot the point  $(5, 3)$ . Beginning at the origin, move 3 units down and 5 units to the left, then plot the point  $(-5, -3)$ . Draw the line through the points.



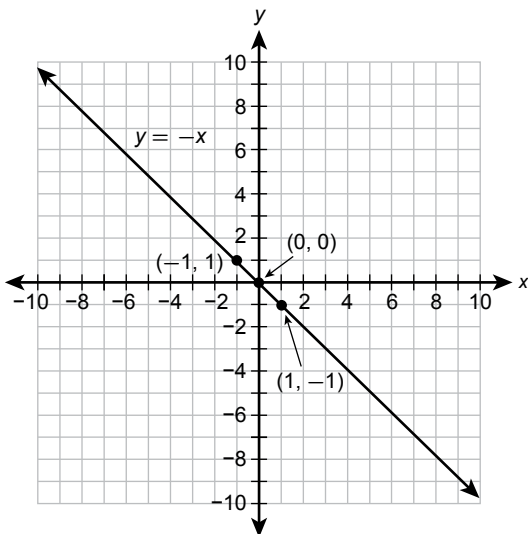
12. The slope is  $-\frac{1}{4}$ . Plot the point  $(0, 0)$ . Beginning at the origin, move 1 unit up and 4 units to the left, then plot the point  $(-4, 1)$ . Beginning at the origin, move 1 unit down and 4 units to the right, then plot the point  $(4, -1)$ . Draw the line through the points.



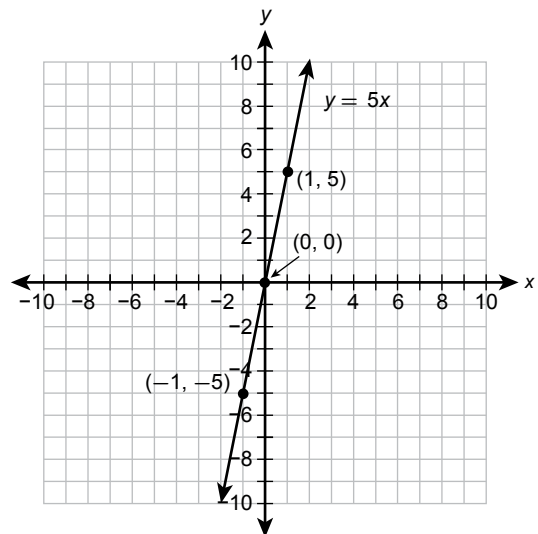
14. The slope is  $-\frac{4}{3}$ . Plot the point  $(0, 0)$ . Beginning at the origin, move 4 units up and 3 units to the left, then plot the point  $(-3, 4)$ . Beginning at the origin, move 4 units down and 3 units to the right, then plot the point  $(3, -4)$ . Draw the line through the points.



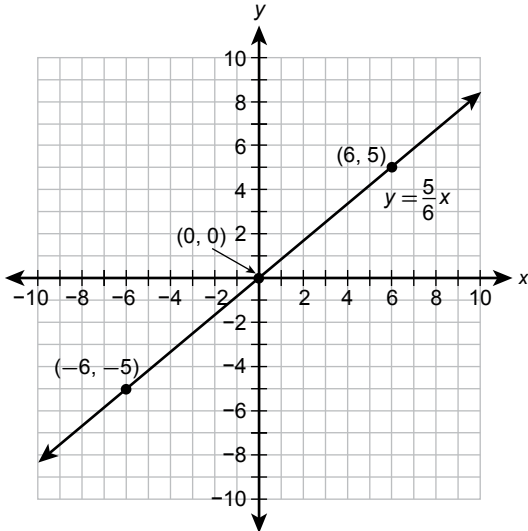
13. The slope is  $-1$ . Plot the point  $(0, 0)$ . Beginning at the origin, move 1 unit up and 1 unit to the left, then plot the point  $(-1, 1)$ . Beginning at the origin, move 1 unit down and 1 unit to the right, then plot the point  $(1, -1)$ . Draw the line through the points.



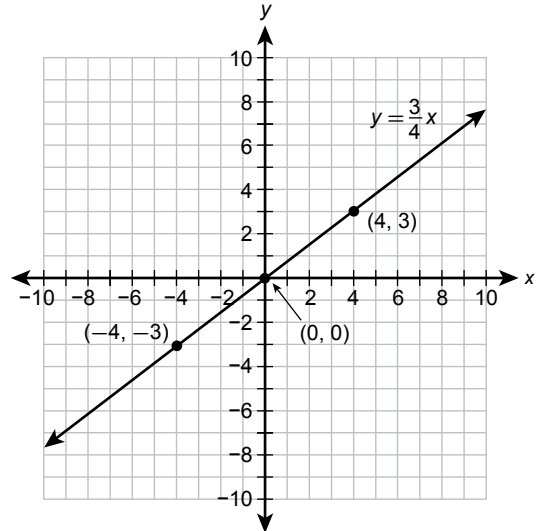
15. The slope is 5. Plot the point  $(0, 0)$ . Beginning at the origin, move 5 units up and 1 unit to the right, then plot the point  $(1, 5)$ . Beginning at the origin, move 5 units down and 1 unit to the left, then plot the point  $(-1, -5)$ . Draw the line through the points.



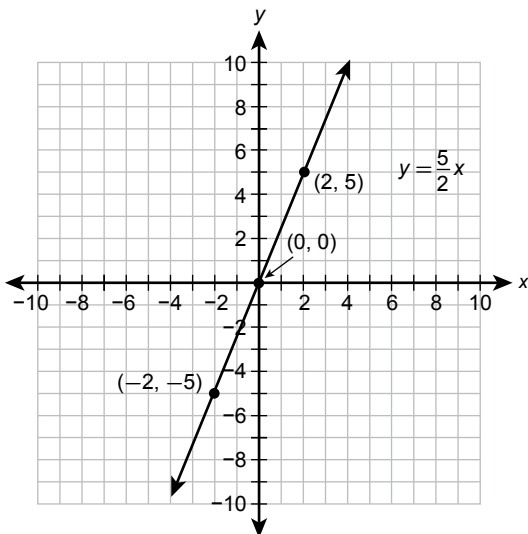
16. The slope is  $\frac{5}{6}$ . Plot the point  $(0, 0)$ . Beginning at the origin, move 5 units up and 6 units to the right, then plot the point  $(6, 5)$ . Beginning at the origin, move 5 units down and 6 units to the left, then plot the point  $(-6, -5)$ . Draw the line through the points.



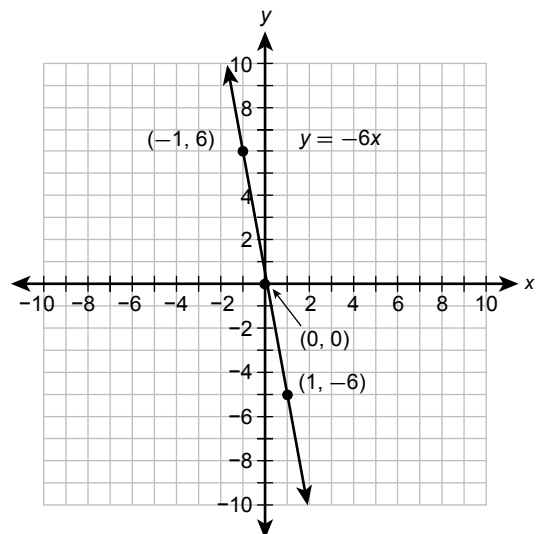
18. The slope is  $\frac{3}{4}$ . Plot the point  $(0, 0)$ . Beginning at the origin, move 3 units up and 4 units to the right, then plot the point  $(4, 3)$ . Beginning at the origin, move 3 units down and 4 units to the left, then plot the point  $(-4, -3)$ . Draw the line through the points.



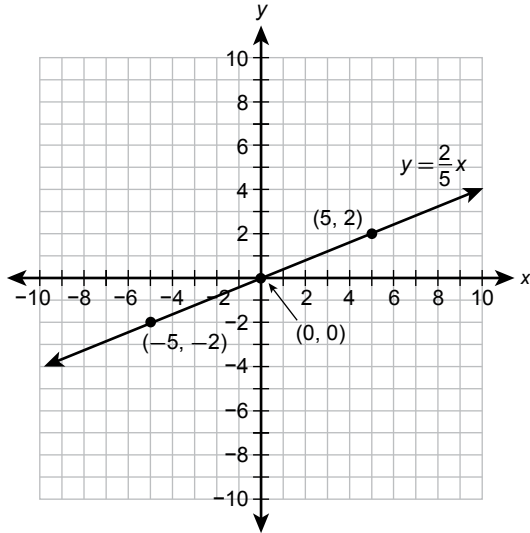
17. The slope is  $\frac{5}{2}$ . Plot the point  $(0, 0)$ . Beginning at the origin, move 5 units up and 2 units to the right, then plot the point  $(2, 5)$ . Beginning at the origin, move 5 units down and 2 units to the left, then plot the point  $(-2, -5)$ . Draw the line through the points.



19. The slope is  $-6$ . Plot the point  $(0, 0)$ . Beginning at the origin, move 6 units up and 1 unit to the left, then plot the point  $(-1, 6)$ . Beginning at the origin, move 6 units down and 1 unit to the right, then plot the point  $(1, -6)$ . Draw the line through the points.



20. The slope is  $\frac{2}{5}$ . Plot the point  $(0, 0)$ . Beginning at the origin, move 2 units up and 5 units to the right, then plot the point  $(5, 2)$ . Beginning at the origin, move 2 units down and 5 units to the left, then plot the point  $(-5, -2)$ . Draw the line through the points.



21. Choose two points on the line, and use the slope formula. Let  $(x_1, y_1) = (0, 0)$  and  $(x_2, y_2) = (4, -3)$ .  
Find the slope:  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{4 - 0} = -\frac{3}{4}$ .  
The equation is  $y = -\frac{3}{4}x$ .
22. Choose two points on the line, and use the slope formula. Let  $(x_1, y_1) = (0, 0)$  and  $(x_2, y_2) = (1, 3)$ .  
Find the slope:  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - 0}{1 - 0} = 3$ .  
The equation is  $y = 3x$ .
23. Choose two points on the line, and use the slope formula. Let  $(x_1, y_1) = (0, 0)$  and  $(x_2, y_2) = (2, -3)$ .  
Find the slope:  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 0}{2 - 0} = -\frac{3}{2}$ .  
The equation is  $y = -\frac{3}{2}x$ .
24. Choose two points on the line, and use the slope formula. Let  $(x_1, y_1) = (0, 0)$  and  $(x_2, y_2) = (1, -4)$ .  
Find the slope:  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-4 - 0}{1 - 0} = -4$ .  
The equation is  $y = -4x$ .
25. Choose two points on the line, and use the slope formula. Let  $(x_1, y_1) = (0, 0)$  and  $(x_2, y_2) = (3, 2)$ .  
Find the slope:  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 0}{3 - 0} = \frac{2}{3}$ .  
The equation is  $y = \frac{2}{3}x$ .