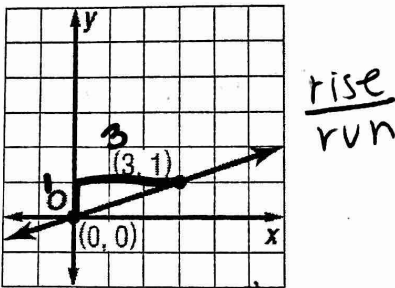


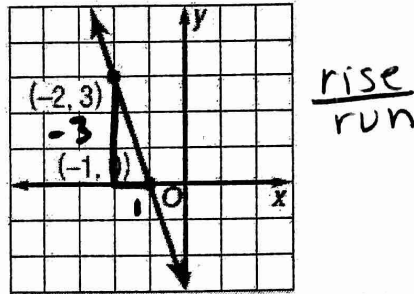
For problems 1-4, find the slope.

1.



$$m = \frac{1}{3}$$

2.



$$m = \frac{-2}{1} = -2$$

3.

	-4	-4	-4	-4
x	10	6	2	-2
y	-4	-2	0	2

$$\frac{\Delta y}{\Delta x} = \frac{2}{-4} = -\frac{1}{2}$$

4.

(2, 5) and (-3, -5) $m = \frac{y_2 - y_1}{x_2 - x_1}$

$$m = \frac{-5 - 5}{-3 - 2} = \frac{-10}{-5} = 2$$

Find the value of y so that the line passing through the two points has the given slope.

5. (9, r) and (3, 2) $m = \frac{2}{3}$

$$\frac{4}{6} = \frac{2}{3}$$

$$\frac{r - 2}{9 - 3} = \frac{2}{3}$$

$$\frac{r - 2}{6} = \frac{2}{3}$$

$$r = 6$$

$$3(r - 2) = 12$$

$$3r - 6 = 12$$

$$\frac{3r}{3} = \frac{18}{3}$$

$$r = 6$$

6. Every hour, a runner is able to run the same number of miles. If on his 3rd hour of running he has gone 15 miles, and on his 5th hour of running he has gone 25 miles, what is the rate at which he runs?

(3, 15) (5, 25)

x = time in hours

y = distance in miles

$$\frac{25 - 15}{5 - 3} = \frac{10}{2} = 5$$

$$5 \text{ miles per hour}$$

6. Solve for y and write your answer in $y = mx + b$ form

a. $2x - 4y = 8$

$$\begin{array}{r} 2x - 4y = 8 \\ -2x \quad -2x \\ \hline -4y = -2x + 8 \\ \frac{-4y}{-4} = \frac{-2x + 8}{-4} \\ y = \frac{1}{2}x - 2 \end{array}$$

b. $y - 1 = -\frac{1}{2}(x + 6)$

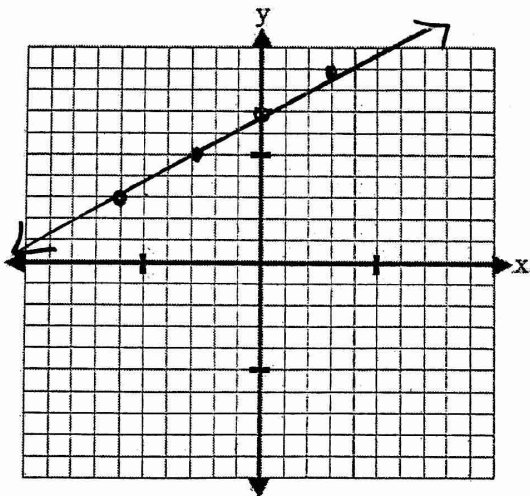
$$y - 1 = -\frac{1}{2}x - 3$$

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

Graph each of the following equations.

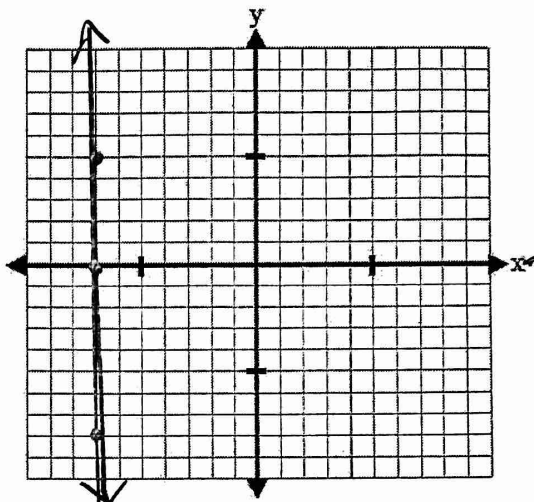
7. $y = \frac{2}{3}x + 7$ ← Slope int.

$m = \frac{2}{3}$ $b = (0, 7)$



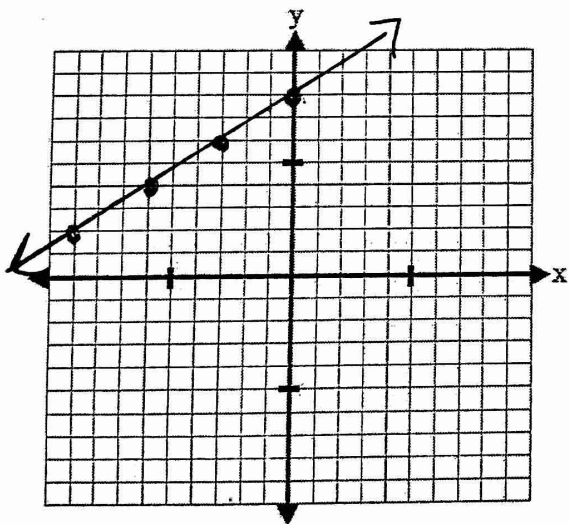
8. $x = -7$

Vertical line



9. $y - 4 = \frac{2}{3}(x + 6)$ ← point slope

$m = \frac{2}{3}$ $Pt (-6, 4)$



10. $6x + 12y = 24$ ← intercepts

X-int $(4, 0)$ y-int $(0, 2)$

