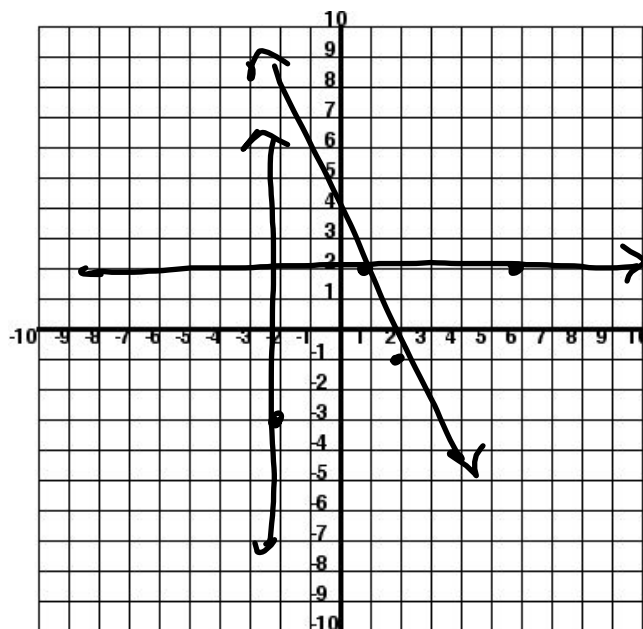


34. $(1, 2), m = -3$

1

35. $(6, 2), m = 0$

36. $(-2, -3),$ undefined



Finding the slope of a line in Standard Form.

$$Ax + By = C \quad m = \frac{-A}{B}$$

Find the slope of each line.

$$3x + 4y = 10 \quad -\frac{3}{4}$$

$$-5x - 7y = 13 \quad \frac{5}{-7}$$

$$-2x + 9y = 13 \quad \frac{2}{9}$$

$$5x - 8y = 15 \quad \frac{-5}{-8} = \frac{5}{8}$$

Graph the lines for the following equations.

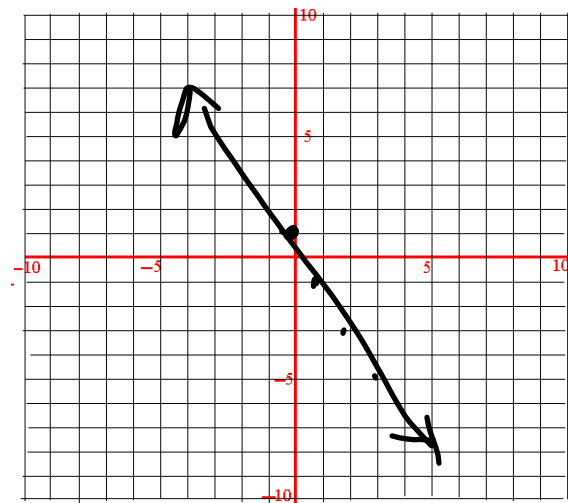
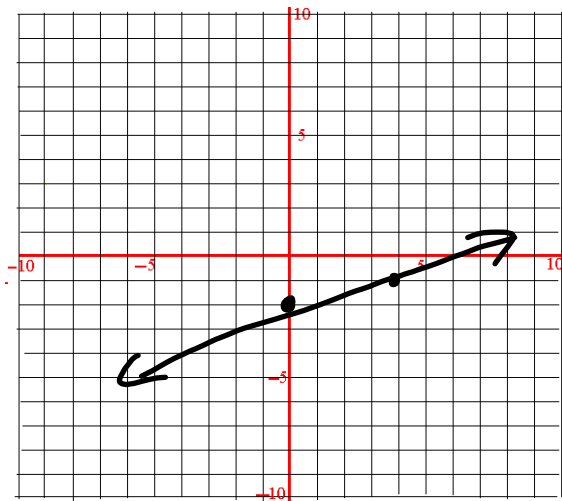
$$y = \frac{1}{4}x - 2 \quad b = -2$$

$$m = \frac{1}{4}$$

Slope Intercept form
 $y = mx + b$

$$y = -2x + 1 \quad b = \text{y-intercept}$$

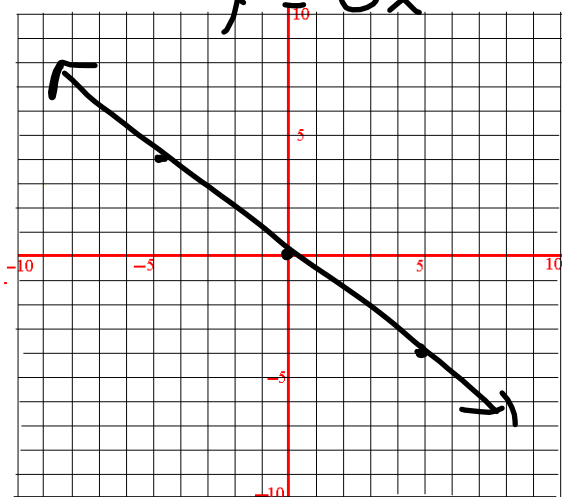
$$\frac{1}{4} = \frac{-1}{4} = -\frac{1}{4}$$



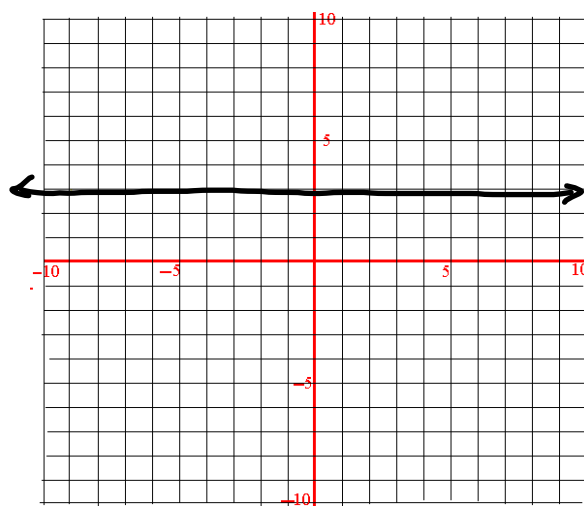
Graph the lines for the following equations.

$$y = -\frac{4}{5}x$$

$$y = 0x$$

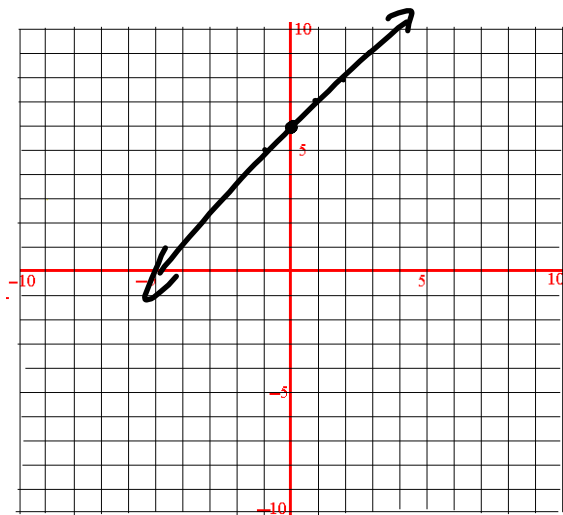


$$y = 3$$

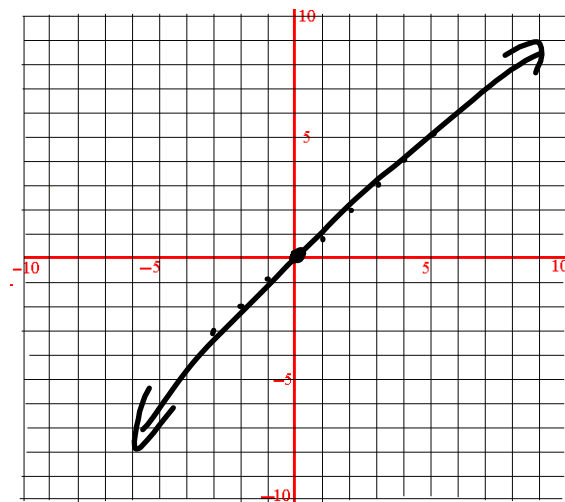


Graph the lines for the following equations.

$$y = x + 6$$



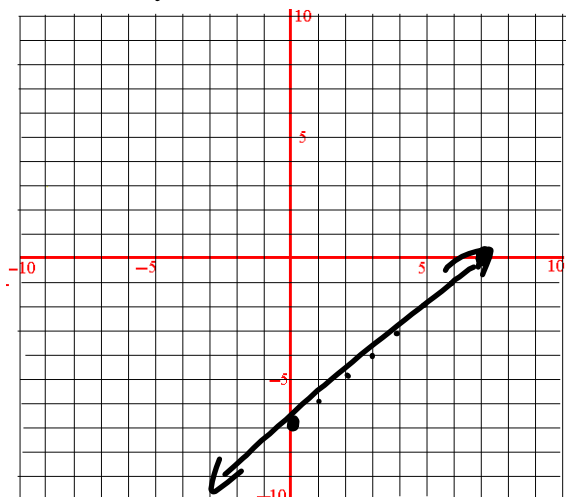
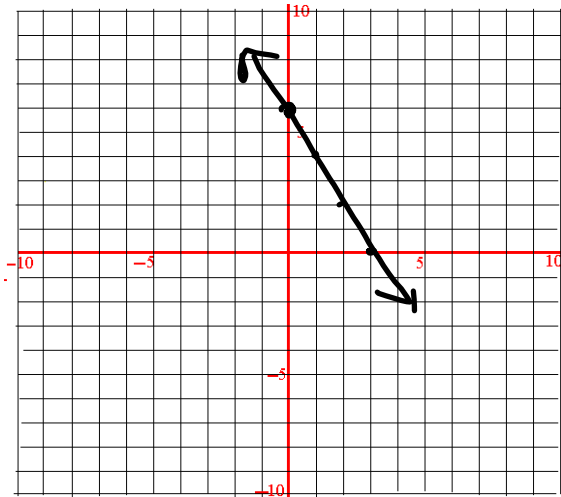
$$y = x$$

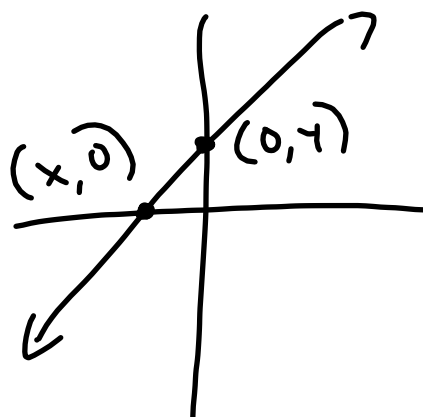


Graph the lines for the following equations. $y = mx + b$

$$-2x + y = 6 \quad y = -2x + 6$$

$$x - y = 7 \quad \begin{aligned} -y &= -x + 7 \\ y &= x - 7 \end{aligned}$$





Graph the lines for the following equations.

$$3x + 5y = 15$$

$$\frac{5y}{5} = \frac{-3x + 15}{5}$$

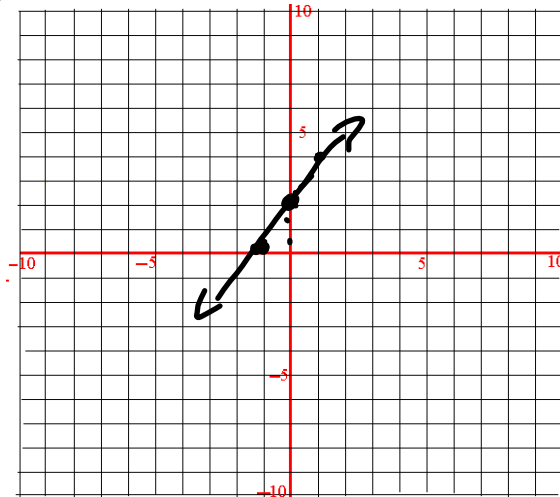
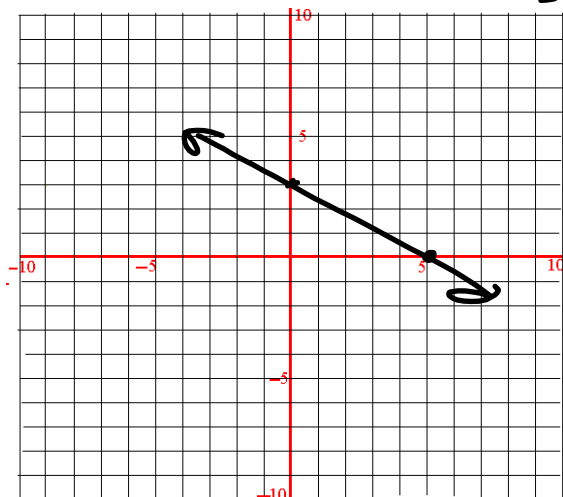
$$y = -\frac{3}{5}x + 3$$

$$2y = 4x + 4$$

$$\frac{2y}{2} = \frac{4x + 4}{2}$$

$$y = 2x + 2$$

$$2y - 4x = 4$$



Stop

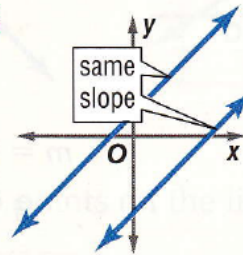
Parallel and Perpendicular Lines

Key Concept

Parallel Lines

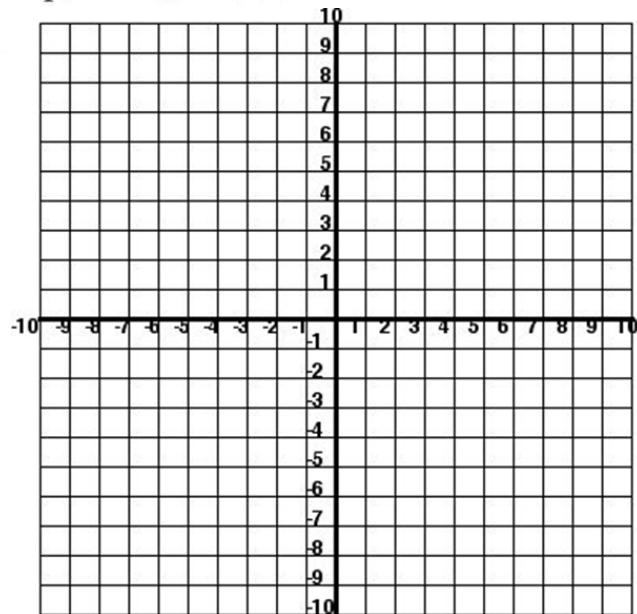
- **Words** In a plane, nonvertical lines with the same slope are parallel. All vertical lines are parallel.

- **Model**



Example 4 Parallel Lines

Graph the line through $(-1, 3)$ that is parallel to the line with equation $x + 4y = -4$.



Graph the line that satisfies each set of conditions.

9. passes through $(0, 3)$, parallel to graph of $6y - 10x = 30$

