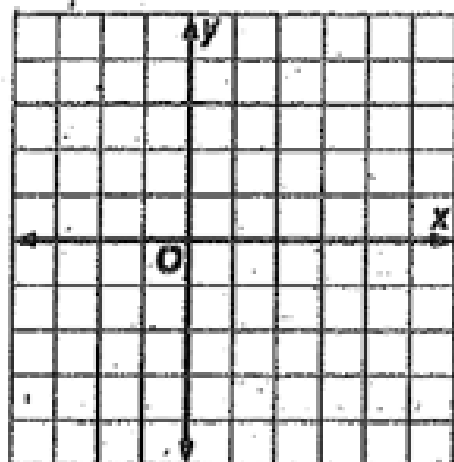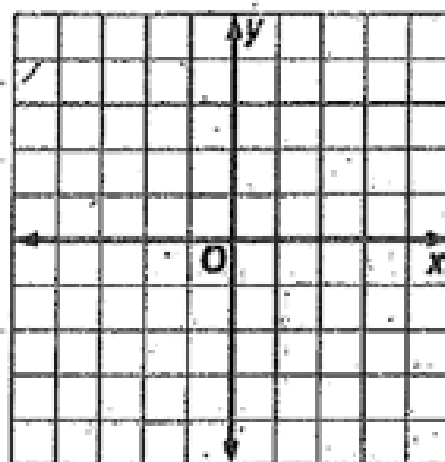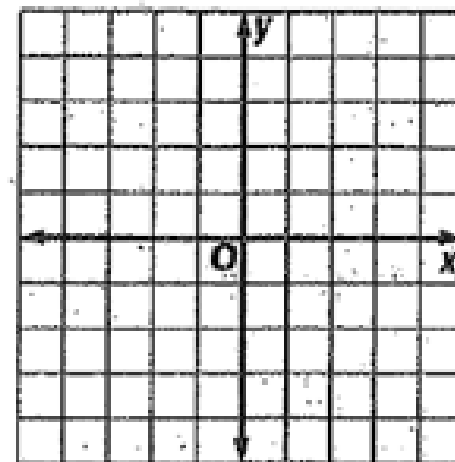**Graph each equation.**

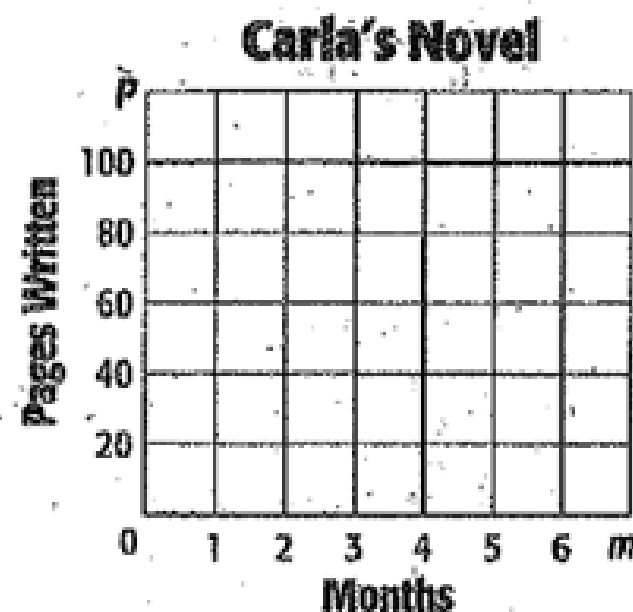8. $y = -\frac{1}{2}x + 2$

9. $3y = 2x - 6$

10. $6x + 3y = 6$

11. **WRITING** Carla has already written 10 pages of a novel. She plans to write 15 additional pages per month until she is finished.

   a. Write an equation to find the total number of pages P written after any number of months m.

   b. Graph the equation on the grid at the right.

   c. Find the total number of pages written after 5 months.

Carla's Novel

1. Write the equation of a line in point-slope form that passes throught the point (-2, 1) and has a slope of -3.

2. If the equation of a line is y - 4 = -2(x + 3), what is the slope of the line and a point through which is passes?

Please get out Lesson 3.4 page 185

Check-In:

Write the equation of a line in slope-intercept form of a line that passes through (4, -6) and has a slope of -1/2.

Direct Variation Check-In

1. Give an example of a linear equation that varies directly (direct variation).

2. Why does your equation vary directly?

Parallel and Perpendicular Lines Check-In

1. Write an equation in **point-slope** form for the line that passes through the given point and is **parallel** to the graph of the given equation.

$$(-4, 2), y = -\frac{1}{2}x + 6$$

2. Write an equation in **point-slope** form for the line that passes through the given point and is **perpendicular** to the graph of the given equation.

$$(-4, 2), y = -\frac{1}{2}x + 6$$

3. Determine whether the graphs of the following equations are *parallel* or *perpendicular*. Explain.
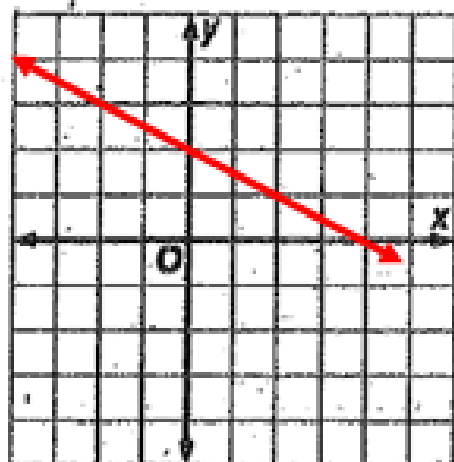
$$y = -2x, 2y = x, 4y = 2x + 4$$

Check-In
Please get out the Writing Equations
worksheet.

1. Write the formula for calculating slope.

2. Find the value of r so the line through
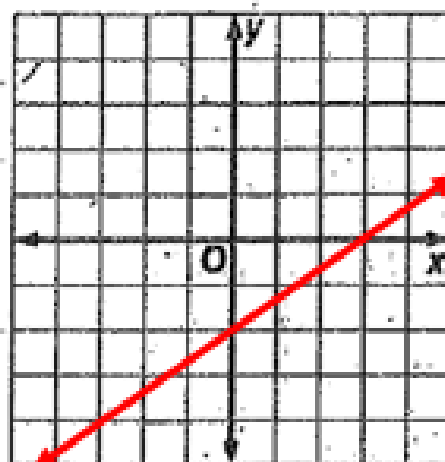each pair of points has the given slope.
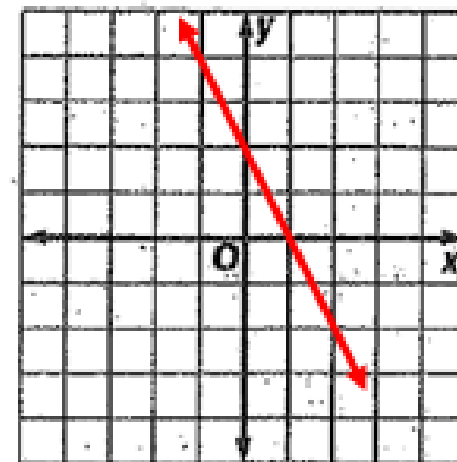
$$(6, 2), (9, r), m = -1$$

Graph each equation.

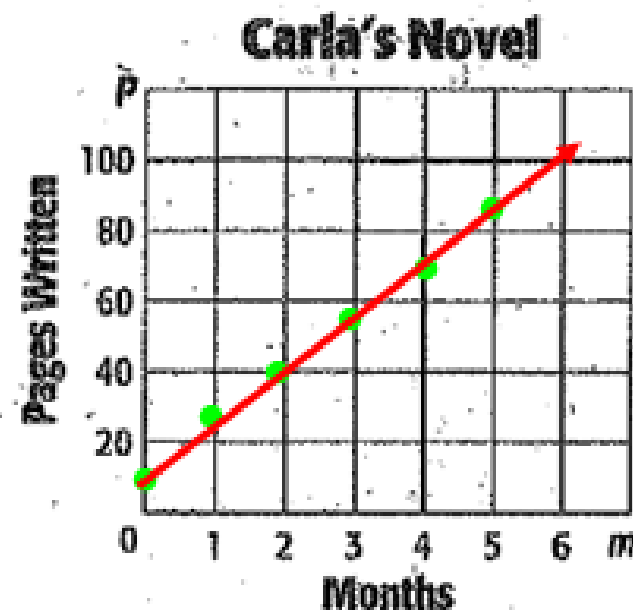**8.** $y = -\frac{1}{2}x + 2$

9. $3y = 2x - 6$

10. $6x + 3y = 6$

11. WRITING Carla has already written 10 pages of a novel. She plans to write 15 additional pages per month until she is finished.

a. Write an equation to find the total number of pages P written after any number of months m.

b. Graph the equation on the grid at the right.

c. Find the total number of pages written after 5 months.

Carla's Novel

1. Write the equation of a line in point-slope form that passes throught the point (-2, 1) and has a slope of -3.

$$y - 1 = -3(x + 2)$$

2. If the equation of a line is y - 4 = -2(x + 3), what is the slope of the line and a point through which is passes?
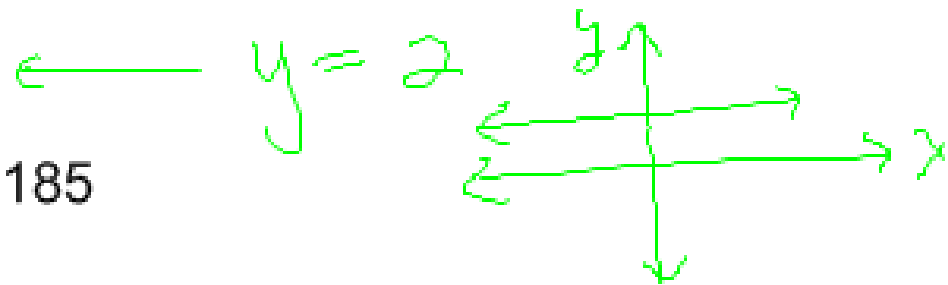
$$y - y_1 = m(x - x_1)$$

$$(-3, 4)$$

$$m = -2$$

$$y - 4 = -2(x - (-3))$$

$$y - 4 = -2(x + 3)$$

$y = 0x + 2$ ← $y = 2$

Please get out Lesson 3.4 page 185

Check-In:

Write the equation of a line in slope-intercept form of a line that passes through (4, -6) and has a slope of -1/2.

$y - y_1 = m(x - x_1)$

$y + 6 = -\frac{1}{2}(x - 4)$

$y + 6 = -\frac{1}{2}x + 2$

$\underline{-6} \qquad \underline{-6}$

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

$y = mx + b$

$-6 = -\frac{1}{2}(4) + b$

$-6 = -2 + b$

$\underline{+2} \qquad \underline{+2}$

$-4 = b$

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

Direct Variation Check-In

1. Give an example of a linear equation that varies directly (direct variation).

$$y = 4x + 0 \qquad y = x + 0$$

$$(0, 0)$$

2. Why does your equation vary directly?

Because it passes through $(0, 0)$.

Parallel and Perpendicular Lines Check-In

1. Write an equation in **point-slope** form for the line that passes through the given point and is **parallel** to the graph of the given equation.

$$(-4, 2), y = -\frac{1}{2}x + 6$$

2. Write an equation in **point-slope** form for the line that passes through the given point and is **perpendicular** to the graph of the given equation.

$$(-4, 2), y = -\frac{1}{2}x + 6$$

3. Determine whether the graphs of the following equations are *parallel* or *perpendicular*. Explain.

$$y = -2x, 2y = x, 4y = 2x + 4$$

Check-In
Please get out the Writing Equations
worksheet.

1. Write the formula for calculating slope.

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

2. Find the value of r so the line through
each pair of points has the given slope.

$$(6, 2), (9, r), m = -1$$

$$\frac{r - 2}{9 - 6} = -1$$

$$(3) \frac{r - 2}{3} = \frac{-1}{1} (3)$$

$$r - 2 = -3$$
$$+2 \quad +2$$

$$r = -1$$