Graphing and Writing Linear Equations and Inequalities

Period_____ Group____

Find the value of x or y so that the line through the points has the given slope.

1) $(x, -8)$ and $(0, 9)$; slope: $-\frac{17}{4}$

Find the slope of the line through each pair of points.

2) $(-8, 16), (3, 1)$

Find the slope of a line parallel to each given line.

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

Find the slope of a line perpendicular to each given line.

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

5) $y = \frac{3}{2}x$

Write the slope-intercept form of the equation of the line through the given point with the given slope.

6) through: $(-5, 4)$, slope = $-\frac{3}{5}$

Write the point-slope form of the equation of the line through the given point with the given slope.

7) through: $(-2, -2)$, slope = undefined

Write the standard form of the equation of the line through the given point with the given slope.

8) through: $(-2, -2)$, slope = $\frac{5}{2}$

Write the slope-intercept form of the equation of the line through the given points.

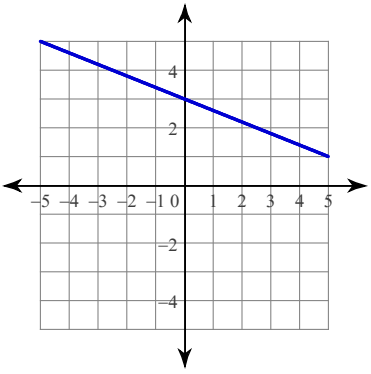
9) through: $(-2, -4)$ and $(3, 4)$

Write the slope-intercept form of the equation of the line described.

10) through: $(-2, -3)$, parallel to $y = 7x$

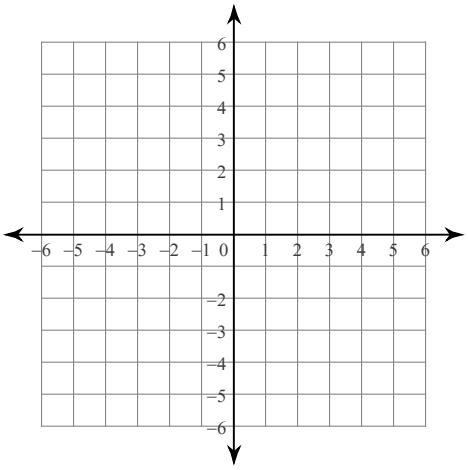
Write the standard form of the equation of each line.

11)

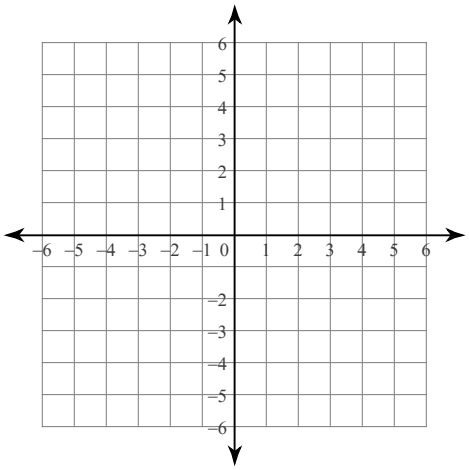


Sketch the graph of each line.

12) $y = \frac{1}{2}x + 4$

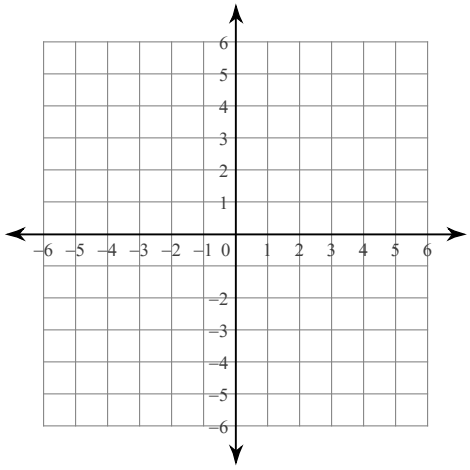


13) $9x - 2y = -10$

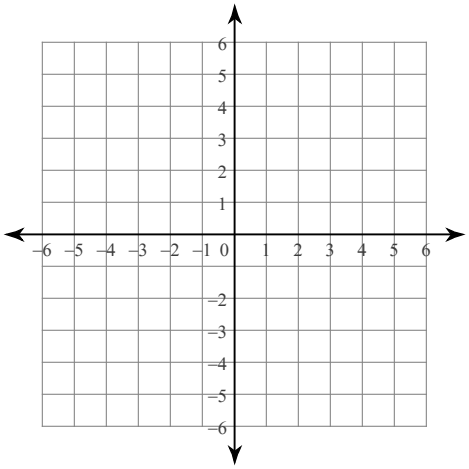


Sketch the graph of each linear inequality.

14) $y > \frac{1}{5}x - 3$



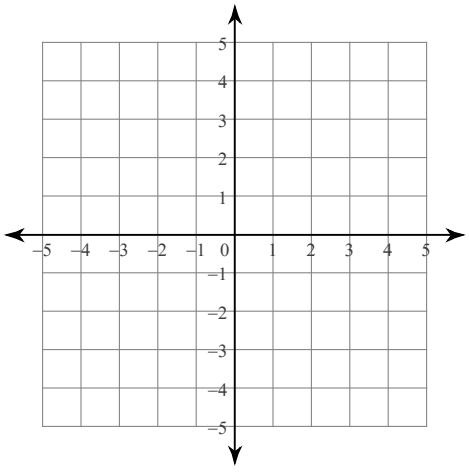
15) $x + y \geq -2$



Sketch the solution to each system of inequalities.

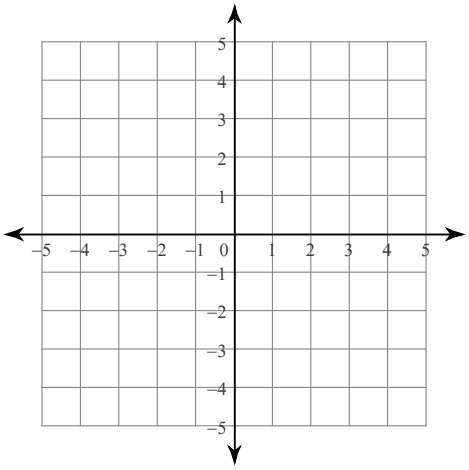
16) $y \geq -\frac{2}{3}x + 3$

$y > x - 2$



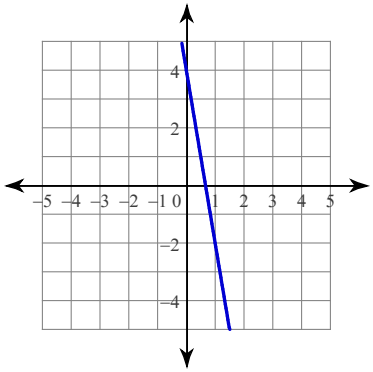
17) $5x - 2y \geq -4$

$5x - 2y > -6$



Write the slope-intercept form of the equation of each line.

18)



Solve each equation.

19) $-5(6+7a) = -2a + 36$

Solve each proportion.

20) $\frac{k}{4} = \frac{k+7}{3}$

Answers to Graphing and Writing Linear Equations and Inequalities (ID: 1)

1) 4

2) $-\frac{15}{11}$

3) $\frac{3}{2}$

4) $\frac{4}{5}$

5) $-\frac{2}{3}$

6) $y = -\frac{3}{5}x + 1$

7) $0 = x + 2$

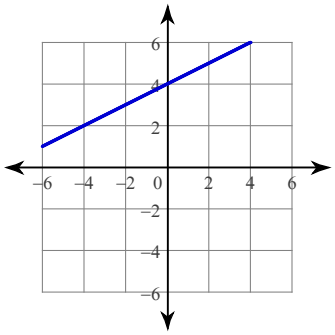
8) $5x - 2y = -6$

9) $y = \frac{8}{5}x - \frac{4}{5}$

10) $y = 7x + 11$

11) $2x + 5y = 15$

12)



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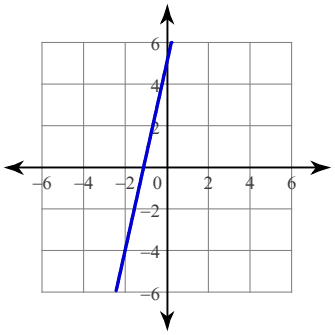

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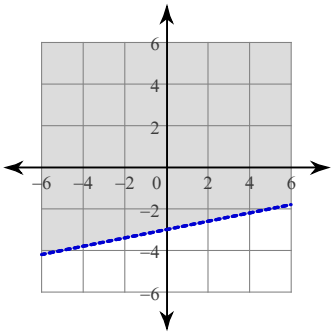

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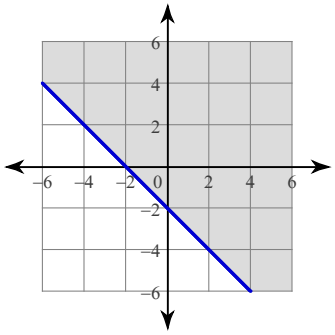

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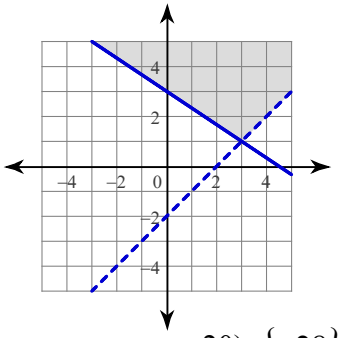

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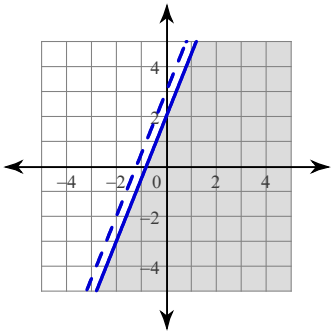

18) $y = -6x + 4$

19) $\{-2\}$

20) $\{-28\}$