

Off-Site Learning Packet Day 3

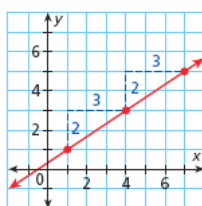
Graphing Lines Review

EXAMPLES:

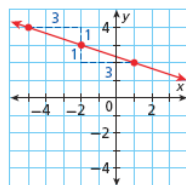
1. Graphing Lines Using Slope and a Point

Graph each line

- a) a line with slope $\frac{2}{3}$ that passes through (1, 1)



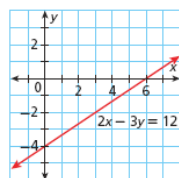
- b) a line with slope $-\frac{1}{3}$ and passes through (-2, 3)



2. Graphing Lines Using the Intercepts

Find the x- and y-intercepts of the equation and then graph the line.

- a) $2x - 3y = 12$ *x - intercept:* $2x - 3(0) = 12$ *y - intercept:* $2(0) - 3y = 12$



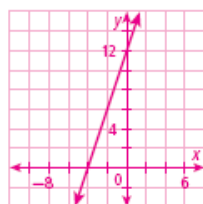
$$2x = 12$$

$$-3y = 12$$

$$x = 6$$

$$y = -4$$

- b) $6x - 2y = -24$ *x - intercept:* $6x - 2(0) = -24$ *y - intercept:* $6(0) - 2y = -24$



$$6x = -24$$

$$-2y = -24$$

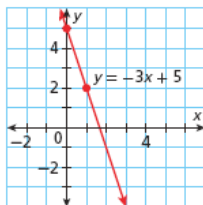
$$x = -4$$

$$y = 12$$

3. Graphing Functions in Slope-Intercept Form

Write each function in slope-intercept form. Then graph the function.

a) $3x + y = 5$

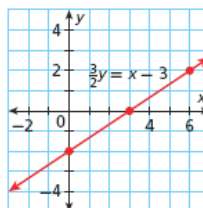


$$y = 5 - 3x$$

$$m = -3$$

$$b = 5$$

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



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

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

$$m = \frac{2}{3}$$

$$b = -2$$

4. Graphing Linear Inequalities

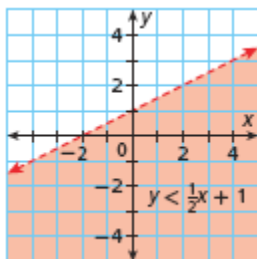
Graph each inequality

a) $y < \frac{1}{2}x + 1$

The boundary line will be dashed because of <.

Use (0,0) as the test point.

$0 < \frac{1}{2}(0) + 1$ Yes, so shade on the side of the line as (0,0)

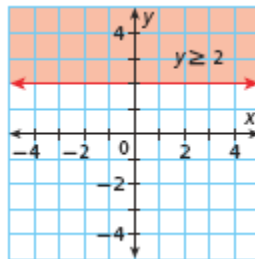


b) $y \geq 2$

The boundary line will be solid because of ≥.

Use (0,0) as the test point.

$0 \geq 2$ No, so shade on the side of the line opposite of (0,0)

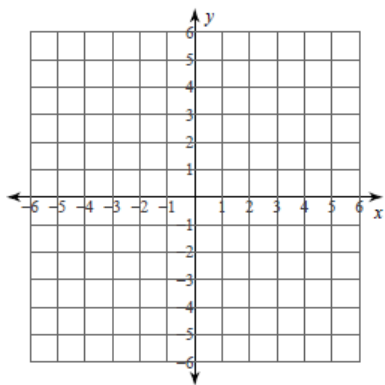


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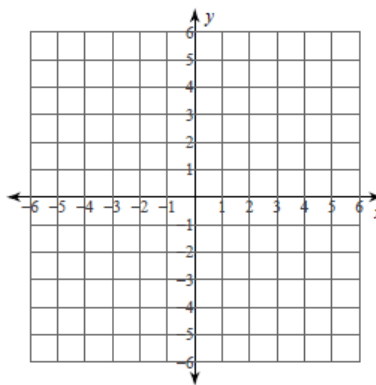
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Graph Linear Equations and Inequalities

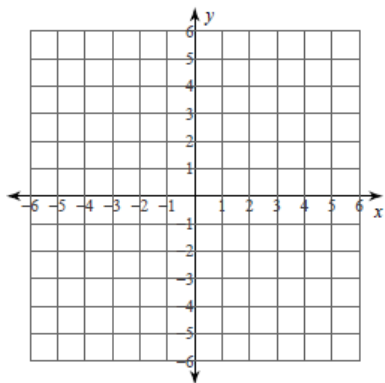
1. $f(x) = \frac{7}{2}x - 2$



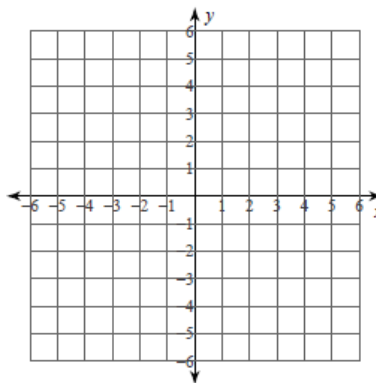
2. $f(x) = -6x + 3$



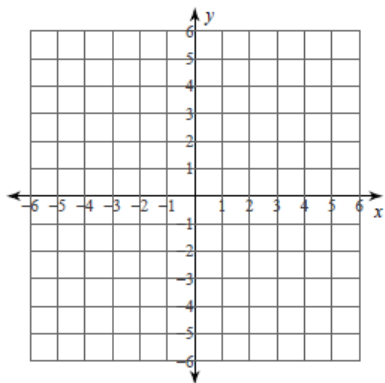
3. $f(x) = 3$



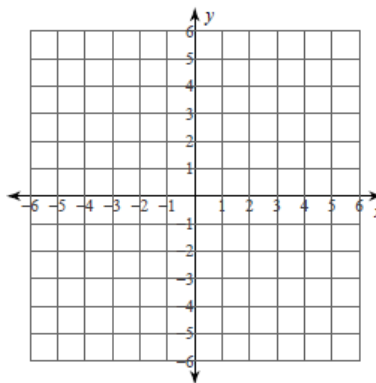
4. $x = -5$



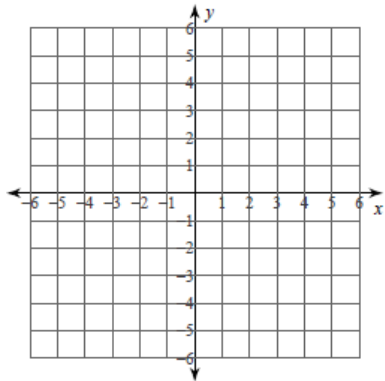
5. $7x + y = 5$



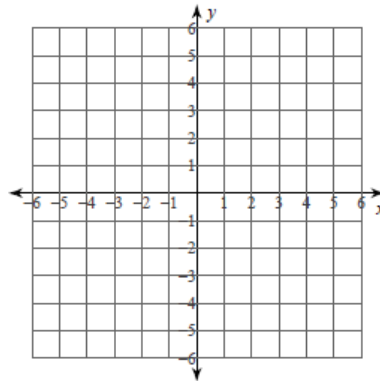
6. $10x - 3y = 15$



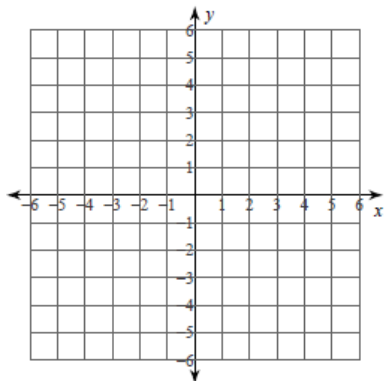
7. $f(x) \geq -3x + 4$



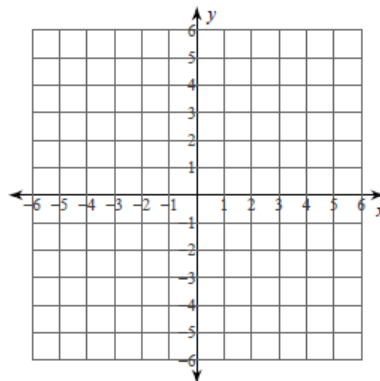
8. $f(x) < \frac{3}{5}x - 5$



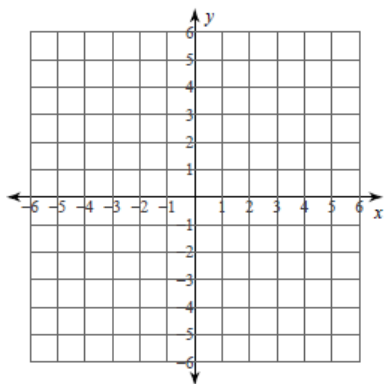
9. $f(x) > 2x - 5$



10. $x < -5$



11. $5x - 3y \leq -15$



12. $x - y > 2$

