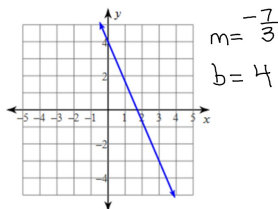


# DO NOW

## Worksheet - CW 3.4 Writing Linear Equations Review; #1

$$y = mx + b$$

$$y = -\frac{7}{3}x + 4$$



Page 1

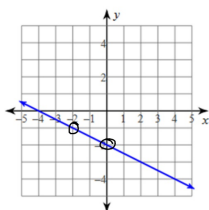
## 3.4 Writing Linear Equations Review

- Slope Intercept Form \*starter  
 $y = mx + b$   
 GIVEN:  $m$  (slope)  
 $b$  (y-intercept) \*Finisher
- Point Slope Form \*starter  
 $y - y_1 = m(x - x_1)$   
 GIVEN:  $m$  (slope)  
 $(x_1, y_1)$  (point)
- Standard Form \*Finisher  
 $Ax + By = C$   
 \*Used to tell what answer should look like (not substituting)  
 → No fractions  
 → "A" cannot be negative

Page 2

<sup>FINISH</sup>  
 Examples: Write the standard form of the equation of the line shown in the accompanying graph:

2.  $m = -\frac{1}{2}$   
 $b = -2$   
 $y = mx + b$   
 $y = -\frac{1}{2}x - 2$   
 $\frac{1}{2}x + y = -2$   
 $2(\frac{1}{2}x + y) = 2(-2)$   
 $x + 2y = -4$



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<sup>FINISH</sup>  
 Write the slope-intercept form of the equation of the line that satisfies the given conditions:

3. passing through the point (3, 2) and perpendicular to  $y = -3x - 3$   
 $m = -3$   
 $\perp m = \frac{1}{3}$   
 $y - y_1 = m(x - x_1)$   
 $y - 2 = \frac{1}{3}(x - 3)$   
 $y - 2 = \frac{1}{3}x - 1$   
 $y = \frac{1}{3}x - 1 + 2$   
 $y = \frac{1}{3}x + 1$

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Write the slope-intercept form of the equation of the line that satisfies the given conditions:

4. passing through the points (1, 3) and (-1, -1)  
 $m = \frac{y_2 - y_1}{x_2 - x_1}$   
 $m = \frac{-1 - 3}{-1 - 1}$   
 $m = \frac{-4}{-2}$   
 $m = 2$   
 $y - y_1 = m(x - x_1)$   
 $y - 3 = 2(x - 1)$   
 $y - 3 = 2x - 2$   
 $y = 2x - 2 + 3$   
 $y = 2x + 1$

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Write the slope-intercept form of the equation of the line that satisfies the given conditions:

5. with a slope of  $\frac{4}{3}$  and passing through (-9, 3)  
 $y - y_1 = m(x - x_1)$   
 $y - 3 = \frac{4}{3}(x + 9)$   
 $y - 3 = \frac{4}{3}x + 12$   
 $y = \frac{4}{3}x + 12 + 3$   
 $y = \frac{4}{3}x + 15$

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*Write the standard form of the equation of the line that satisfies the given conditions:*

6. passing through the point  $(-4, 2)$  parallel to  $x + y = 5$

$$\begin{aligned}y - y_1 &= m(x - x_1) & y &= -x + 5 \\y - 2 &= -1(x + 4) & m &= -1 \\y - 2 &= -x - 4 & \parallel m &= -1 \\x + y - 2 &= -4 \\x + y &= -4 + 2 \\x + y &= -2\end{aligned}$$

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*Write the standard form of the equation of the line that satisfies the given conditions:*

6. perpendicular to the x-axis and passing through  $(-5, 2)$   
parallel to y-axis

no y

↑  
x-value

$$\boxed{x = -5}$$

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# HOMEWORK

Worksheet - HW 3.4 Writing Linear  
Equations Review

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