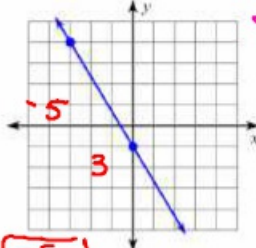


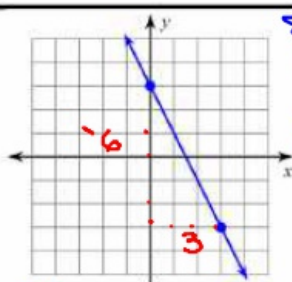
Name:	Date:
Topic/Obj.: Write linear equations	Class/Period:

in $y = mx + b$ form

Questions/Main Ideas:	Notes:
<p>How do you write an equation in slope intercept form?</p> <p>What do we already know?</p> <p>What are the two things needed to write the equation in slope intercept form?</p>	<p>RECALL:</p> $y = mx + b$ <p>$m = \text{slope}$</p> <p>$b = y \text{ intercept}$</p>
<p>What do I already know?</p>	<p>Example: Write an equation of the line in slope intercept form with a slope of -2 and a y-intercept of 5.</p> <p>Write slope intercept form $y = mx + b$ and Substitute -2 for m and 5 for b.</p> $y = -2x + 5$
<p>Try again....</p>	<p>1. slope is 8; y intercept is -7. b</p> $y = 8x - 7$ <p>2.) slope is $\frac{3}{4}$; y intercept is -3. b</p> $y = \frac{3}{4}x - 3$
<p>From a Graph:</p> <p>Where would you start?</p> <p>Step 1: find the Slope.</p> <p>Step 2: find b</p> <p>Step 3: write the equation</p>	<p>Write an equation of the line shown in slope intercept form.</p>  <p>$(-3, 4) (0, -1)$</p> $m = \frac{-1 - 4}{0 - (-3)} = \frac{-5}{3}$ $y = mx + b$ $4 = \frac{-5}{3}(-3) + b$ $4 = \frac{15}{3} + b$ $4 = 5 + b$ $\frac{-5}{-5} = \frac{-5}{-5}$ $-1 = b$ $y = \frac{-5}{3}x - 1$

Example: Write the equation of the line shown

y intercept is when $x=0$



$$-\frac{6}{3} = -2$$

$$\star (0, 3) (3, -3)$$

$$m = \frac{-3-3}{3-0} = -\frac{6}{3} = \boxed{-2}$$

$$y = mx + b$$

$$3 = -2(0) + b$$

$$\boxed{3 = b}$$

$$\boxed{y = -2x + 3}$$

Example: Write an equation of the line that passes through the points.

$(-3, 1)$ and $(0, -8)$

$(2, -7)$ and $(0, -5)$

$$\star (-3, 1) (0, -8)$$

$$m = \frac{-8-1}{0-(-3)} = -\frac{9}{3} = \boxed{-3}$$

$$y = mx + b$$

$$-8 = -3(0) + b$$

$$\boxed{-8 = b}$$

$$y = -3x - 8$$

$$\star (2, -7) (0, -5)$$

$$m = \frac{-5-(-7)}{0-2} = \frac{2}{-2} = \boxed{-1}$$

$$y = mx + b$$

$$-5 = -1(0) + b$$

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

$$y = -1x - 5$$

