

Name:	Date:
Topic/Objective: Write linear equations in standard form.	Class/Period:

How do you write an equation in standard form?

Questions/Main Ideas:	Notes:
What does standard form look like?	<p>Standard form looks like..... <math>Ax + By = C</math>  <math>2x + 3y = 5</math></p> <p>A, B, and C are real numbers.... They have no fractions +  <b>no negative A value</b></p>
Let's write the equation in standard form....	<p>1.) <math>y = 5x + 8</math>  <math>-5x \quad -5x</math>  <math>-1 \quad -1</math>  <math>(-5x + y = 8)^{-1}</math>  <math>5x - y = -8</math></p> <p>2.) <math>y = \frac{3}{2}x + 10</math>  <math>- \frac{3}{2}x \quad - \frac{3}{2}x</math>  <math>2 \quad 2</math>  <math>(-\frac{3}{2}x + y = 10)^2</math>  <math>-1 \quad -1</math>  <math>(-3x + 2y = 20)^{-1}</math>  <math>3x - 2y = -20</math></p>
Guided practice	<p>3.) <math>y = 2x + 1</math>  <math>-2x \quad -2x</math>  <math>-1 \quad -1</math>  <math>(-2x + y = 1)^{-1}</math>  <math>2x - y = -1</math></p> <p>4.) <math>y = -\frac{1}{4}x + 2</math>  <math>+\frac{1}{4}x \quad +\frac{1}{4}x</math>  <math>4 \quad 4</math>  <math>(\frac{1}{4}x + y = 2)^4</math>  <math>x + 4y = 8</math></p>
<p>EXAMPLE:  Doesn't this look familiar?</p> <ul style="list-style-type: none"> <li>Find the slope</li> <li>Write the equation in point slope form</li> <li>Rewrite in standard form</li> </ul> <p><math>y - y_1 = m(x - x_1)</math></p>	<p>Write an equation in standard form through the points (3, -1) and (2, 3)</p> <p>① <math>m = \frac{3 - (-1)}{2 - 3}</math>  <math>m = \frac{4}{-1} = -4</math></p> <p>② <math>y - 3 = -4(x - 2)</math>  Convert to <math>y = mx + b</math></p> <p>③ <math>y - 3 = -4x + 8</math>  <math>+3 \quad +3</math>  <math>y = -4x + 11</math></p> <p>convert to <math>Ax + By = C</math></p> <p>④ <math>y = -4x + 11</math>  <math>+4x \quad +4x</math>  <math>4x + y = 11</math></p>



Now convert.....  
Point slope form

Slope intercept form

Standard form

A line passes through the points  $(1,4)$  and  $(6,-1)$  find the equation of this line in:

- A.)Point slope form
- B.)Slope intercept form
- C.)Standard form

A line passes through the points  $(-3,6)$  and  $(6,0)$  find the equation of this line in:

- A.)Point slope form
- B.)Slope intercept form
- C.)Standard form

