Review for Ch.4 quiz

Point-Slope Form: $y - y_1 = m(x - x_1)$

If you asked to just write in point-slope form, you just put in the values and get rid of all your double negatives, you don't have to do anything fancy with it.

m = -2 (2 ,-4)

$y - -4 = -2(x - 2)$

$y + 4 = -2(x - 2)$

m = ¼ (-2 , -3)

$y + 3 = \frac{1}{4}(x + 2)$

Oct 13-8:02 AM

Write the equation of the line passing through the given points in **point-slope form.**

(2, -4) (3 , 2)

$m = \frac{2 - -4}{3 - 2} = \frac{6}{1} = 6$

$y - 2 = 6(x - 3)$

(7 , -2) (12 , 3)

$m = \frac{3 - -2}{12 - 7} = \frac{5}{5} = 1$

$y - 3 = 1(x - 12)$

Oct 13-8:02 AM

Slope-Intercept Form: $y = mx + b$

If it is in standard form or point slope form and you are placing it in slope-intercept form -- just have to solve for y.

$4x - 2y = 12$

$-4x \quad -4x$

$\frac{-2y}{-2} = \frac{-4x + 12}{-2} \quad \frac{}{-2}$

$y = 2x - 6$

$y - 2 = -\frac{3}{4}(x - 4)$

$y - 2 = -\frac{3}{4}x + 3$

$+2 \quad +2$

$y = -\frac{3}{4}x + 5$

Oct 13-7:56 AM

Slope-intercept form: _____

If you are given a point and slope use point slope form to write the equation of the line. Then solve for y.

m = -2 (3 ,1)

$y - 1 = -2(x - 3)$

$y - 1 = -2x + 6$

$+1 \quad +1$

$y = -2x + 7$

m = ½ (4 , -3)

$y + 3 = \frac{1}{2}(x - 4)$

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

$-3 \quad -3$

$y = \frac{1}{2}x - 5$

Oct 13-8:01 AM

Slope-intercept form: _____

If you are given two points use point slope form to write the equation of the line. Then solve for y.

(2 , 4) (4 , 3)

$m = \frac{3 - 4}{4 - 2} = \frac{-1}{2}$

$y - 4 = -\frac{1}{2}(x - 2)$

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

$+4 \quad +4$

$y = -\frac{1}{2}x + 5$

(-2 , 4) (-5 , 7)

$m = \frac{7 - 4}{-5 + 2} = \frac{3}{-3} = -1$

$y - 4 = -1(x + 2)$

$y - 4 = -1x - 2$

$+4 \quad +4$

$y = -1x + 2$

Oct 13-8:01 AM

Standard form: $Ax + By = C$

Remember x and y are together; A (the x value) cannot be negative; and there are no fractions or decimals!

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

$2y = -1x + 8$

$+1x \quad +1x$

$1x + 2y = 8$

$3y - x + 2 = 8$

$-2 \quad -2$

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

$x - 3y = -6$

Oct 13-8:11 AM

Standard form: _____

Also, if it isn't in slope-intercept form, you have to create that equation first!

y - 4 = ¼(x - 8)

$y - 4 = \frac{1}{4}x - 2$

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

$4y = 1x + 8$

$-1x + 4y = 8$

$x - 4y = -8$

m = 3 (2 , 4)

$y - 4 = 3(x - 2)$

$y - 4 = 3x - 6$

$y = 3x - 2$

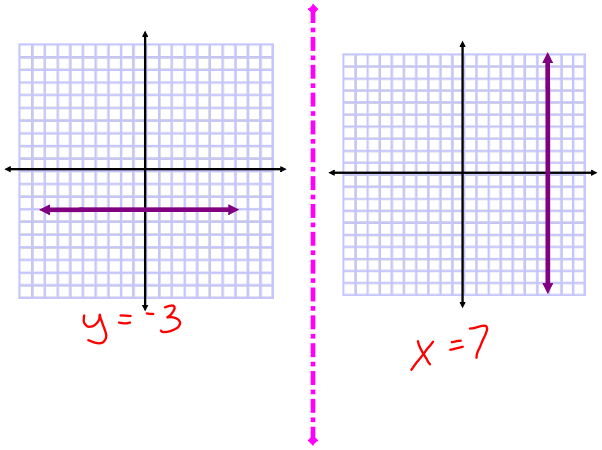
$-3x - 3x$

$-3x + y = -2$

$3x - y = 2$

Oct 13-8:11 AM

Special Graphs - Standard form.



Oct 13-8:08 AM

Place the following in all three linear forms:

Point-Slope Form; Slope-intercept Form; Standard Form

1. m = -¾ (4 , -1)

1. $y + 1 = -\frac{3}{4}(x - 4)$

2. $y + 1 = -\frac{3}{4}x + 3$

$4(y = -\frac{3}{4}x + 2)4$

3. $4y = -3x + 8$

$+3x \quad +3x$

$3x + 4y = 8$

Oct 6-7:24 AM

Place the following in all three linear forms:

Point-Slope Form; Slope-intercept Form; Standard Form

2. (2 , 4)(-2 , 6)

$m = \frac{6-4}{-2-2} = \frac{2}{-4} = -\frac{1}{2}$

P/S: $y - 4 = -\frac{1}{2}(x - 2)$

S/I: $y - 4 = -\frac{1}{2}x + 1$

$+4 \quad +4$

2. $y = -\frac{1}{2}x + 5$

Std: $2y = -1x + 10$

$+1x \quad +1x$

$1x + 2y = 10$

Oct 6-7:24 AM