

January 9, 2012

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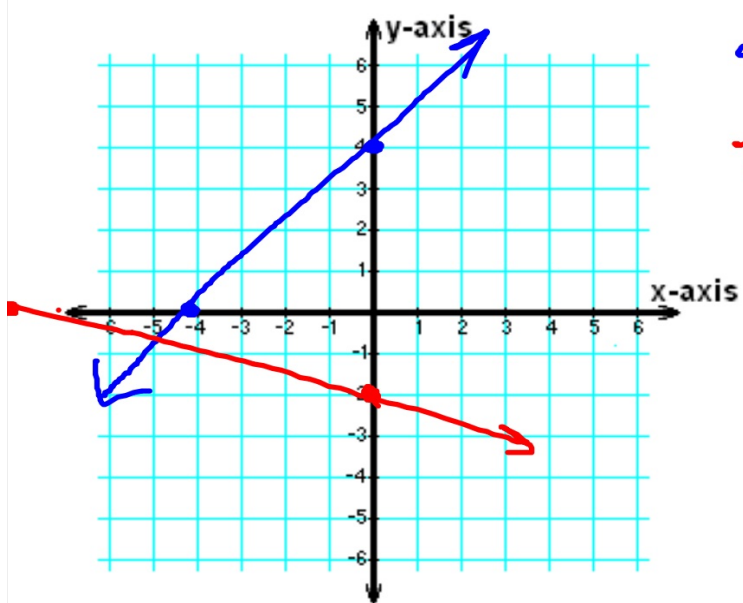
$$15) \quad 0 = x + \frac{1}{6}y + \frac{1}{6}$$

$$\begin{array}{c} -\frac{1}{6}y \\ +\frac{1}{6} \end{array} \left(+\frac{1}{6}y \right) = \left(x + \frac{1}{6} \right) - \frac{1}{6}$$

$$y = -6x - 1$$

$$4) x - y = -4$$

$$7) x + 4y = -8$$



1/9 - Writing Equations in Standard Form

Standard Form:

$$Ax + By = C$$

- A, B, C are integers (no fractions)
- x and y are in alphabetical order
- *First # is positive*

Examples:

$$2x + 3y = 6 \quad | \quad 4x - y = 2 \quad | \quad x - 4y = -4$$

-19 is on the wrong side
y is on the wrong side
Alphabetical order

$$\begin{aligned} -19 + 3x &= -7y \\ +19 & \quad +19 \\ 3x &= -7y + 19 \\ +7y & \quad +7y \\ 3x + 7y &= 19 \end{aligned}$$

6 is on the wrong side
x is on the wrong side
alphabetical order

$$\begin{aligned} 6 - 2y &= -x \\ -6 & \quad -6 \\ -2y &= -x - 6 \\ +x & \quad +x \\ x - 2y &= -6 \end{aligned}$$

2y is on the wrong side
1st # is negative
alphabetical

$$-x = -6 + 2y$$

$$\begin{array}{r} -2y \qquad -2y \\ -x = -6 + 2y \end{array}$$

$$+x + 2y = +6$$

$$\underline{x + 2y = 6}$$

5 is on the wrong side
y is on the wrong side
alphabetical

$$-9x + 5 = -y$$

$$\begin{array}{r} -5 \qquad -5 \\ -9x + 5 = -y \end{array}$$

$$-9x = -y - 5$$

$$\begin{array}{r} +y \qquad +y \\ -9x = -y - 5 \end{array}$$

$$\underline{-9x + y = +5}$$

$$9x - y = 5$$

$$-5y + 2x + 10 = 0$$

$$-5y + 2x = -10$$

$$2x - 5y = -10$$

$$C = Ax + By$$

$$0 = -x - 4y + 16$$

$$-16 = -x - 4y$$

$$16 = x + 4y$$

or

$$x + 4y = 16$$

$$\overset{15}{\cancel{15}} \left(\frac{4}{\cancel{15}} x \right) + \overset{3}{\cancel{15}} \left(\frac{1}{\cancel{5}} y \right) = 1 \cdot 15$$
$$4x + 3y = 15$$

$$4 \cdot 4 \cdot \left(\frac{7}{4} x \right) = -y \cdot 4$$

$$16 - 7x = -4y$$
$$+7x \quad +7x$$

$$16 = 7x - 4y$$

or

$$7x - 4y = 16$$

Time everything by the LCD to get rid of fractions

HOMework

Gold worksheet

due Wednesday