

Bellwork Monday, April 7, 2014

1. Without graphing tell if each system of equations has ONE, NONE, or MANY solutions.

a) $y = -2x - 9$

$$\begin{array}{r} 10x - 5y = 45 \\ -10x \\ \hline -5y = 45 \\ y = -9 \end{array}$$

(one)

b) $y = -3x$

$$\begin{array}{r} -3x + y = 7 \\ +3x \\ \hline y = 7 \end{array}$$

(one)

b)

$$y = -3x + 1$$

$$4x - y = 13$$

$$4x - (-3x + 1) = 13$$

$$4x + 3x - 1 = 13$$

$$7x - 1 = 13$$

$$+1$$

$$7x = 14$$

$$x = 2$$

$$y = -5$$

(2, -5)

2. Solve each system of equations.

a)

$$2x + 2y = 32$$

$$-5x + 6y = -25$$

(11, 5)

$$6x + 6y = 96$$

$$-5x + 6y = -25$$

$$11x = 121$$

$$x = 11$$

$$y = 5$$

3. Graph this system of inequalities. Shade the solution region a different color.

$$y > -3x - 5$$

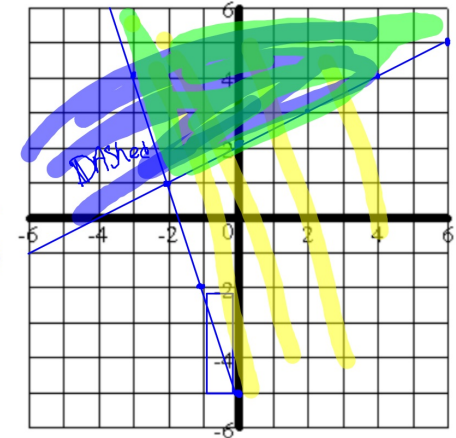
$$0 \leq -48$$

$$12x - 24y \leq -48$$

POST (0,0)

$$x - 12y = -4$$

$$y - 12x = -\frac{4}{12} = -\frac{1}{3}$$



4. At a basketball game one of the players makes 12 shots. He only takes 2pt shots and 3pt shots. The player scored a total of 29 points. Write and solve a system of equations to find the number of 2pt and 3pt shots made.

$x = \#$ 2 pt shots made
 $y = \#$ 3 pt shots made

$$\begin{array}{rcl} (x+y=12) \cdot 2 & 2x+2y=24 & \\ (2x+3y=29) \cdot 1 & -2x+3y=29 & \hline \end{array}$$

$$\begin{array}{r} -1y = -5 \\ y = 5 \end{array}$$

$$\begin{array}{r} 2x + 3(5) = 29 \\ -15 = -15 \\ \hline 2x = 14 \\ \frac{2x}{2} = \frac{14}{2} \quad x = 7 \end{array}$$

# 2pt	7
# 3pt	5