Tuesday, November 15, 2016 Bellwork Alg 2A

1. Solve this system of equations. State the solution as an ordered pair.

$$y = \frac{2}{3}x - 4$$
$$5x - 6y = 15$$

2. State the number of solutions for each system of equations without graphing.

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

$$12x + 3y = 21$$

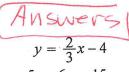
$$5e + 20d = -15$$

$$8d + 2e = 14$$

3. A design is made up of squares and equilateral triangles. There is a total of 85 sides. The number of squares is nine less than twice the number of triangles. Write and solve a system of equations to find the number of squares and triangles in the design.

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1. Solve this system of equations. State the solution as an ordered pair.



$$5x - 6y = 15$$

$$(-9,-10)$$
 5x -

Using substitution
$$(-9,-10) 5x - 6(\frac{2}{3}x - 4) = 15$$

$$5x - 4x + 24 = 15$$

$$X + 24 = 15$$

 $-24 - 24$
 $X = -9$

$$y = \frac{2}{3}(-9) - 4$$

2. State the number of solutions for each system of equations without graphing.

a)

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

$$12x + 3y = 21$$

$$y = -4x - 7$$

(x,y) (d,e)

$$5e + 20d = -15$$
 $\Rightarrow e = \frac{-15 - 20d}{5} = -3 - 4d$

$$8d + 2e = 14$$

$$e = \frac{73-26}{5} = -3-4$$

 $e = \frac{14 - 8d}{2} = \frac{7 - 4d}{1}$

3. A design is made up of squares and equilateral triangles. There is a total of 85 sides. The number of squares is nine less than twice the number of triangles. Write and solve a system of equations to find the number of squares and triangles

in the design.

11 TRIANGLES 13 squares