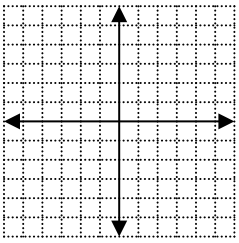
Math 30 Practice Test #3

Directions: **Show all your work on these pages**. Place answers on the appropriate spaces. Write all fractions in lowest terms. Have Fun.

1. Determine weather or not (– 3, 5) is a solution to the following system:

$$\frac{1}{3}x + 2y = 9$$
$$-\frac{4}{3}x + y = 1$$

(Circle one) yes no



2. Solve by graphing: $y = \frac{2}{3}x - 4$

$y = -\frac{1}{3}x - 1$ _____

Solve by substitution: $2x + 3y = -10$
$y = x + 5$

_____

4. Solve by addition (elimination): $2x - 5y = 7$
$-4x + 10y = 3$

_____

Problems 5 – 8, solve any way you choose, **and describe the graph of the system**:

5. $3x + 2y = 8$
$6x - 5y = 7$

_____
_____

6. $2x - 4y = -8$
$y = \frac{3}{2}x + 5$

_____
_____

7. $2x + 3y = 7$
$5x - 2y = 6$

_____
_____

8. $2x + 3y = 7$
$4x + 6y = 11$

_____
_____

9. You invest $12,000 for one year in two accounts, one paying 4% interest and the other paying 9% interest. The total interest you collect for the year is $905. How much is in each account?

_____

10.. A restaurant purchases 15 table cloths and 8 napkins for $286. A week later, ten table cloth and six napkins were bought for $192. Find the cost of one tablecloth and the cost of one napkin, assuming the prices were the same for both purchases.

Answers:

1. no

2. (3, -2) (With drawing)

3. (-5, 0)

4. no solutions

5. (2, 1), Lines cross at that point

6. $\left(-3, \frac{1}{2}\right)$, Lines cross at that point

7. $\left(\frac{32}{19}, \frac{23}{19}\right)$, Lines cross at that point

8. no solutions, Parallel lines

9. $3,500 in the 4% account
   $8.500 in the 9% account

10. Table cloths cost $18
    Napkins cost $2