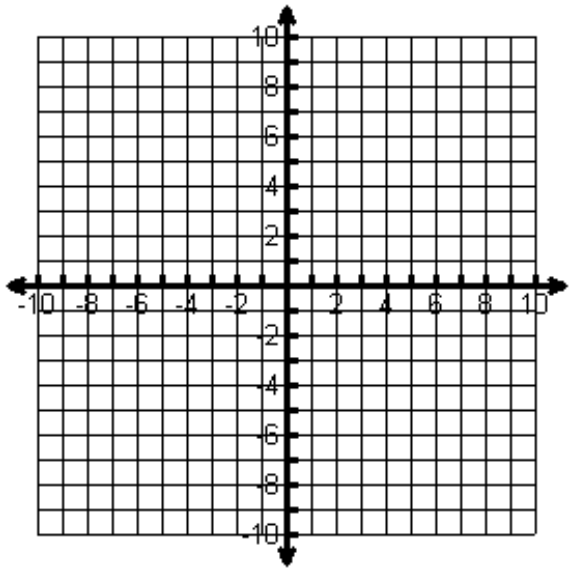
Name _____ Date _____

1. Solve the following system using **graphing**:

$x + 2y = 8$
$5x - 4y = 12$



2. Solve the following system of equations by using **elimination**:

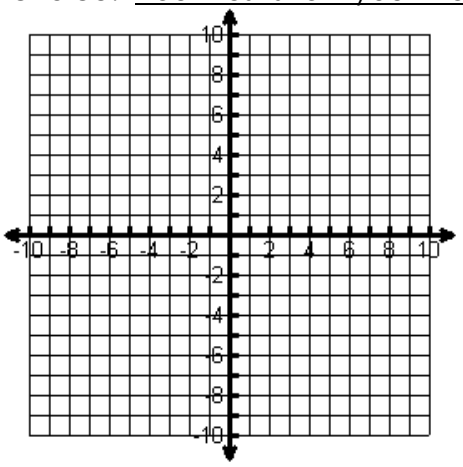
$-12x + 5y = 23$
$-2x + y = 3$

3. Solve the following system of equations using **substitution**:

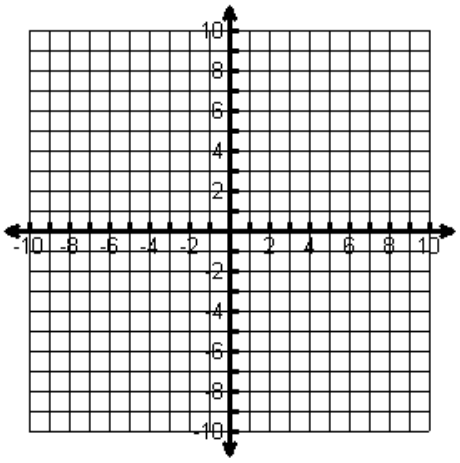
$y = 5x + 9$
$2x + 4y = 14$

Solve the following systems of equations using the method of your choice. You must show your work to receive credit.:

4. $5x - 4y = 20$
   $6x + y = -5$



5. $3x + 3 = -6y$
   $6x + 12y + 6 = 0$



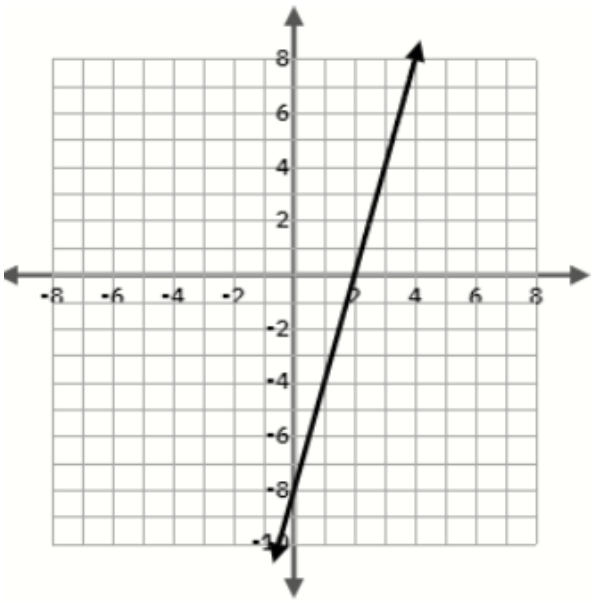
Solve each of the following. **You must show your equations and work to receive credit.**

6. Rent-A-Car rents compact cars for a fixed amount per day plus a fixed amount for each mile driven. Benito rented a car for 4 days, drove it 430 miles, and spent $92.70. Lisa rented the same car for 5 days, drove it 360 miles, and spent $110.55. What is the charge per day and the charge per mile for the compact car?

7. You are buying supplies for a party this weekend. Balloons cost $2.25 a package and streamers cost $0.85 a roll. If you bought 12 items and spent a total of $20, how many of each item did you buy?

REVIEW from Unit 1

8.



Domain: _____ Range: _____

Increasing: _____ Decreasing: _____

y – int in function notation: _____

Rate of Change [-6, 3]: Zero: _____

_____

End Behavior: $x \to -\infty$, $f(x) \to$ _____
$x \to \infty$, $f(x) \to$ _____

Multiple Choice. Circle the correct letter AND write the corresponding capital letter.

9. Given the following set of equations, which of the variables will require the FEWEST steps to isolate?
$$\begin{aligned} 5x - 3y &= -7 \\ 2x + y &= 18 \end{aligned}$$

A. x in the first equation
C. x in the second equation

_____ B. y in the first equation
D. y in the second equation

10. Given $\begin{aligned} 4x + 7y &= 19 \\ -2x - 3y &= 18 \end{aligned}$, which is the most efficient first step to solve by elimination?

A. Multiply the bottom equation by 2
C. Multiply the bottom equation by 1/2

_____ B. Solve for x in the first equation.
D. Multiply the top equation by 3 and the bottom equation by 7

11. Given the set of equations: $\begin{aligned} -8 - y &= -3x \\ 2x &= -25 + 5y \end{aligned}$, what are the coordinates of the solution?

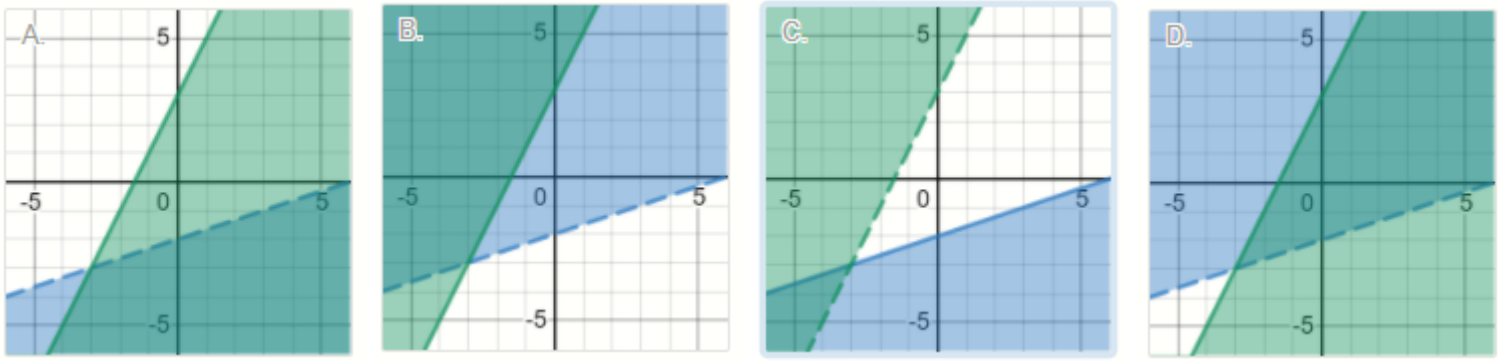
A. $(5,-7)$ B. $(5,7)$ C. $(-7,-5)$ D. $(7,5)$

_____

12. Which of the following graphs represents the given system of inequalities?

$$x - 3y < 6$$
$$2x - y \geq -3$$

_____



A. B. C. D.

13. The junior and senior classes decided to plan a trip to the Georgia Aquarium this year. The junior class rented and filled 9 vans and 3 buses with 219 students. The seniors rented and filled 5 vans and 9 buses with 349 students. Knowing that each van and each bus carried the same number of students, how many students can a van carry and how many students can a bus carry?

_____

A. A van carries 11 and a bus carries 41
B. A van carries 20 and a bus carries 36
C. A van carries 13 and a bus carries 42
D. A van carries 14 and a bus carries 31

14. How many solutions does the following system of equations have?

$$5x = -y + 8$$
$$15x + 12 + 3y = 0$$

_____

A. Exactly 1 solutions
B. Exactly 2 solution
C. No solutions
D. Infinite solutions

15. Which of the following points is a solution to the given system?

$$x - 2y \leq -4$$
$$3x + 2y > -4$$

A. $(-4,1)$ B. $(4,1)$ C. $(1,4)$ D. $(-1,-4)$

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