

Name _____

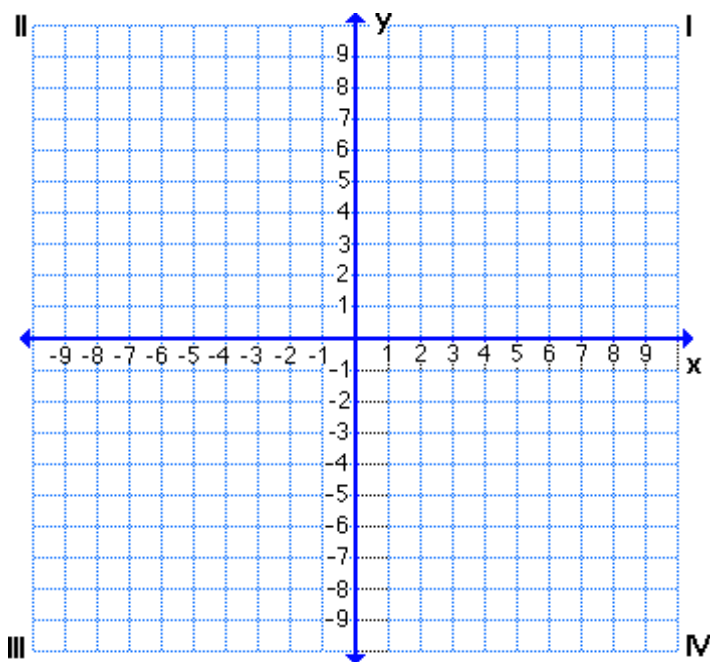
Date _____ Pd. _____

Notes: Elimination Using Multiplication Day 3**NOTES****Solving Systems of Equations Review: Linear Treasure Hunt**

The purpose of this problem is for students to review solving systems of linear equations. In this problem, lines are used to simulate trails for finding buried treasure. Students should work in groups to solve the problem.

Problem:

Someone has buried treasure bags at points with integral coordinates within a triangular region. The region is bounded by the graphs of $y = 6 - x$; $y = x - 2$; and $y = \frac{1}{2}x + 3$. In order to find the treasure, your group must draw lines that go through a vertex of the triangular region and point(s) containing treasure. Write the equation for each line drawn. The goal is to determine and write the minimal number of equations to locate all the treasure.



Name _____

Date _____ Pd. _____

Exit Card: Elimination Using Multiplication Day 3

Kerry wishes to solve this system of equations:

$$3x - 4y = 20$$

$$7x + 8y = 50$$

Kerry decides to multiply the first equation by 2 and then add the equations. What will be the result?

- A. $10x = 70$ B. $10x = 90$ C. $13x = 70$ D. $13x = 90$
-

BCR

A furniture company needs to ship 96 sofas and 57 chairs. They have small trucks and large trucks.

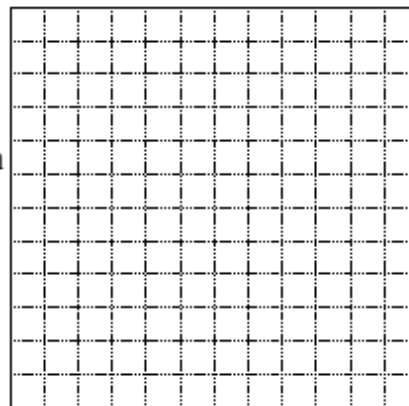
Each small truck is designed to hold 4 sofas and 3 chairs.

Each large truck is designed to hold 12 sofas and 6 chairs.

Let x represent the number of small trucks needed.

Let y represent the number of large trucks needed.

- Write a system of equations that represents this situation.
- Solve your system of equations. Use mathematics to explain how you determined your solution. Use numbers, symbols and/or words in your explanation.
- Write a sentence describing the meaning of your solution in the context of this problem.



Name _____

Date _____ Pd. _____

Homework: Pages 391 – 392 (30 – 32, 45, 46)

30.
$$\begin{cases} x = 4y + 8 \\ 2x - 8y = -3 \end{cases}$$

31.
$$\begin{cases} 2x - 3y = 12 \\ x + 3y = 12 \end{cases}$$

32.
$$\begin{cases} 4x - 2y = 14 \\ y = x \end{cases}$$

45. If $5x + 3y = 12$ and $4x - 5y = 17$, what is the value of y ?

A -1

B 3

C (-1, 3)

D (3, -1)

46. Determine the number of solutions of the system $x + 2y = -1$ and $2x + 4y = -2$.

A 0

B 1

C 2

D infinitely many