

Systems Review
Assignment

Show all work for
credit!!

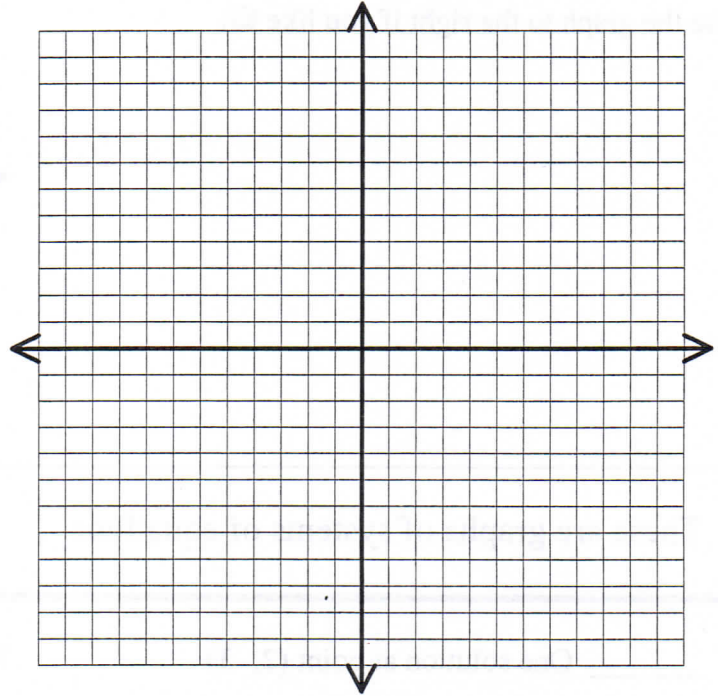
Name _____
Period _____

Systems of Equations

Solve the system of equations by graphing

1.
$$\begin{cases} y = \frac{4}{5}x - 3 \\ y = -x + 6 \end{cases}$$

Solution:



Solve the system of equations by Substitution

2.
$$\begin{cases} y = x + 3 \\ y = -\frac{1}{3}x + \frac{5}{3} \end{cases}$$

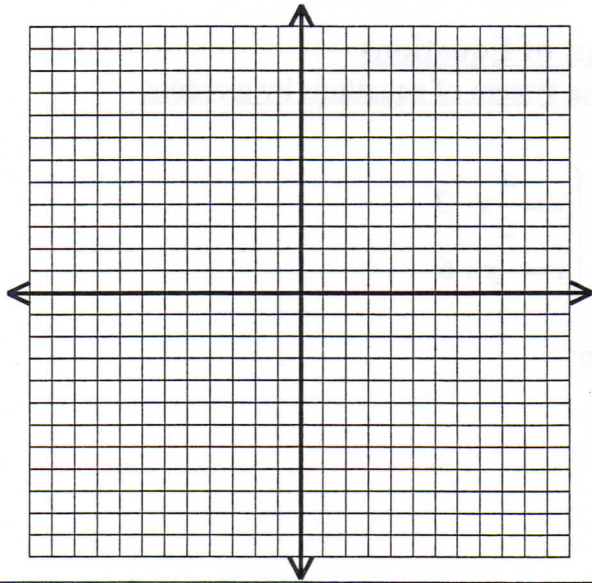
Solve the system of equations by Elimination

3.
$$\begin{cases} 9x - 6y = -12 \\ x + 2y = 0 \end{cases}$$

Solve the following system of equations by any method of your choice

4.
$$\begin{cases} y = x \\ y = -7 \end{cases}$$

(use the graph to the right if you like 😊)



These are graphs of systems of equations

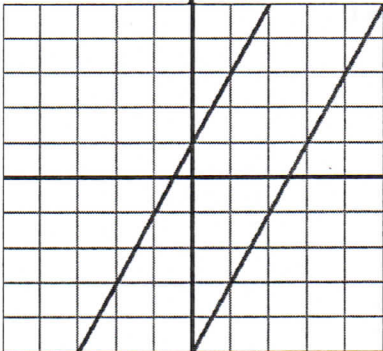
Match the graph with the appropriate description

5. _____ One solution at point (2, -3)

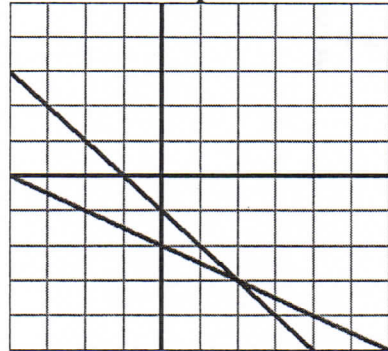
7. _____ One solution at point (0, 1)

6. _____ No solutions

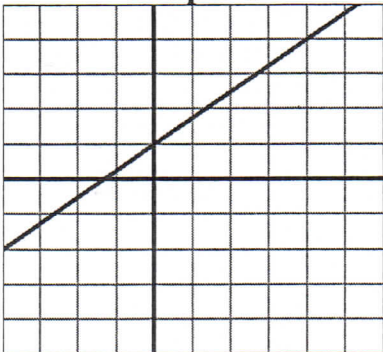
Graph A



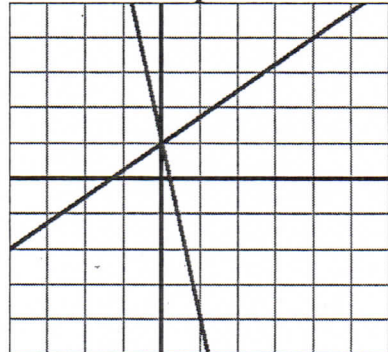
Graph B



Graph C



Graph D



8. Elaine claims that $(1, -2)$ is a solution to the following system of inequalities:
$$\begin{cases} 3x - 2y \leq 7 \\ 6x + y > 2 \end{cases}$$

Jane insists that it is not a solution.

Who is correct? For credit, please justify with mathematics and explain using words.

Solve by any method of your choice. Please show your work clearly.

9.

Matt and Ming are selling fruit for a school fundraiser. Customers can buy small boxes of oranges and large boxes of oranges. Matt sold 3 small boxes of oranges and 14 large boxes of oranges for a total of \$203. Ming sold 11 small boxes of oranges and 11 large boxes of oranges for a total of \$220. Find the cost each of one small box of oranges and one large box of oranges.

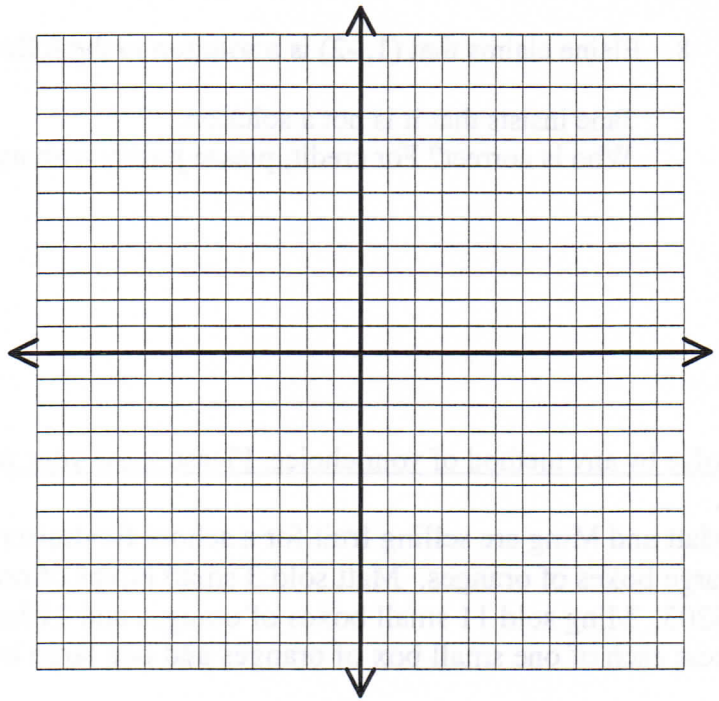
Solve and Graph (on number line)

10. $-3x + 15 > 30$

11. $15 + 25x \leq 13x - 150$

Solve the System of Inequalities by Graphing

12.
$$\begin{cases} y > \frac{4}{5}x - 3 \\ y \geq -x + 6 \end{cases}$$



Real-World system of equations PJ's Garage and Will's Fix-it Cheaper will both fix your car for a price.

- PJ's Garage charges \$36 to look at your car plus \$40 per hour of service
- Will's Fix-it Cheaper does not charge to look at your car, but charges \$52 per hour of service

Write the equation for cost (C) with h hours of service using PJ's Garage.

Write the equation for cost (C) with h hours of service using Will's Fix-it Cheaper.

Solve for how many hours of service the the cost will be the same. What is the cost?