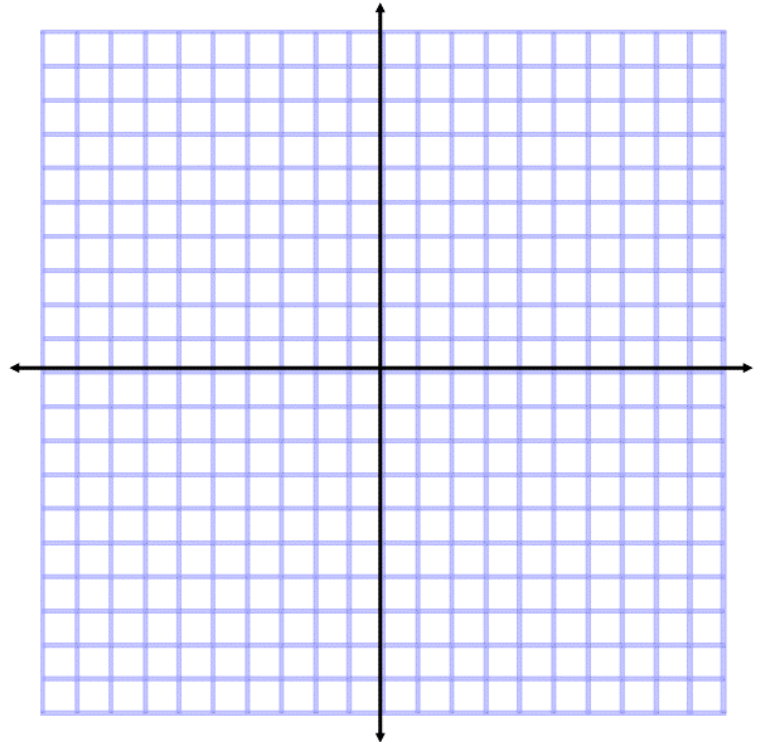


**Goal 5: Solve and apply linear systems**

1. Estimate the solution of the linear system graphically. Then check the solution algebraically.

$$\begin{aligned}x + 2y &= -6 \\ -3x + y &= -10\end{aligned}$$



2. Check whether the ordered pair is a solution of the system of linear equations.

Show or explain how you know.

$$-3x + y = 6 \quad (-4, -6)$$

$$-x + y = -2$$

When doing number 3 and 4 you may choose either substitution or linear combination. If you use substitution in # 3 then you must use linear combination in # 4 and so you need to choose wisely. Your objective is to achieve a correct solution for each system and demonstrate your skill at each method.

3. Solve the linear system by substitution or linear combination.

- Show all your work
- Check your solution

$$2y + 2x = 3$$

$$x - 4y = -1$$

4. Solve the linear system by substitution or linear combination.

- Show all your work
- Check your solution

$$9x - 4y = -18$$

$$-3x + 3y = 6$$

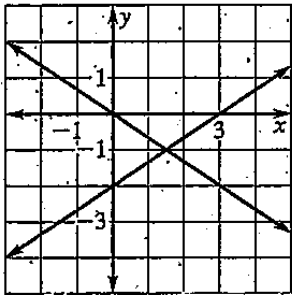
5. Match the graph with its linear system and tell how many solutions the system has

**A.**  $-9x + 3y = -6$   
 $-3x + y = -2$

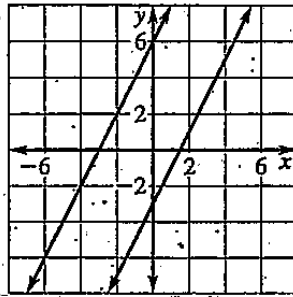
**B.**  $-2x + 3y = -6$   
 $2x + 3y = 0$

**C.**  $x - 4y = 7$   
 $5x + y = -7$

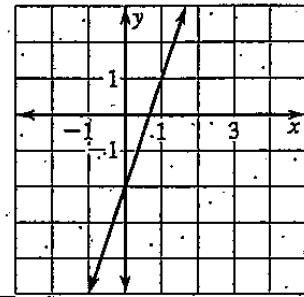
**D.**  $-2x + y = 6$   
 $-4x + 2y = -6$



Graph 1



Graph 2



Graph 3

	Graph 1		Graph 2		Graph 3	
Letter Choice						
No. of solutions						

Working Out space- if needed

6. You sold two different types of wrapping paper for your fundraiser. One type sold for \$ 6 and the other for \$ 8 . You collected \$ 92 for the 14 rolls you sold. How many rolls of each type did you sell?
7. A pharmacy mailed 300 advertisements, smaller advertisements requiring \$ 0.3 postage and larger advertisements requiring \$ 0.5 postage. If the cost of the postage is \$ 130, find the number of advertisements mailed at each rate.
8. Mr. and Mrs. Henry left their house at the same time, driving in opposite directions. Mr. Henry drove 5 km/h faster than his wife. After 4h they were 452 km apart. How far did each drive?