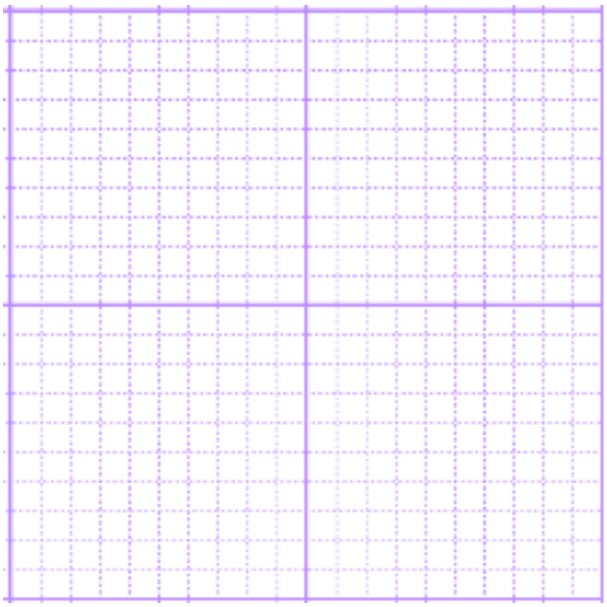
Graph each equation to find the point of intersection.

Test Name_____

*Remember to find a **nice starting point**, then use **the slope** to find other nice points.*

Problem 1

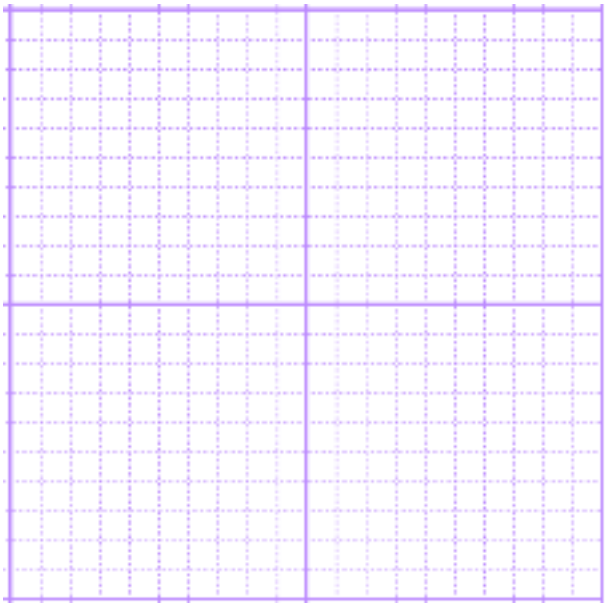


$y = \frac{2}{3}x + 4$

$x - y = -2$

Pt of Intersection _____

Problem 2

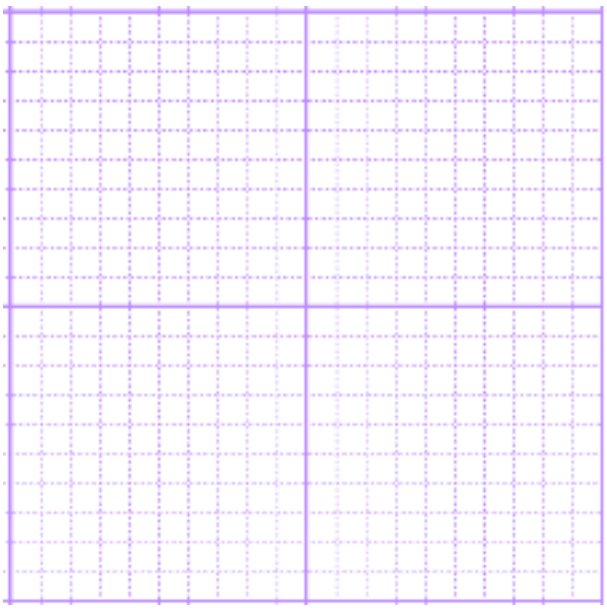


$x + 3y = 15$

$y = \frac{3}{2}x - 6$

Pt of Intersection _____

Problem 3

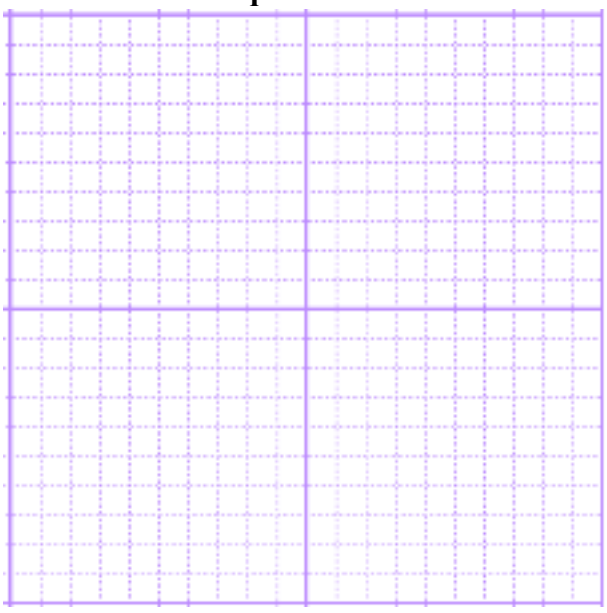


$3x + 2y = 4$

$y = \frac{5}{2}x + 10$

Pt of Intersection _____

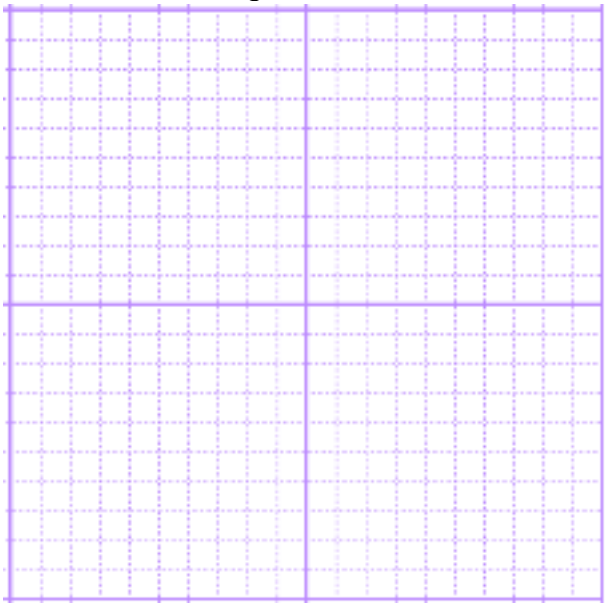
Problem 4 **Inequalities**



$y > \frac{1}{2}x - 5$

$5x + 2y \leq 14$

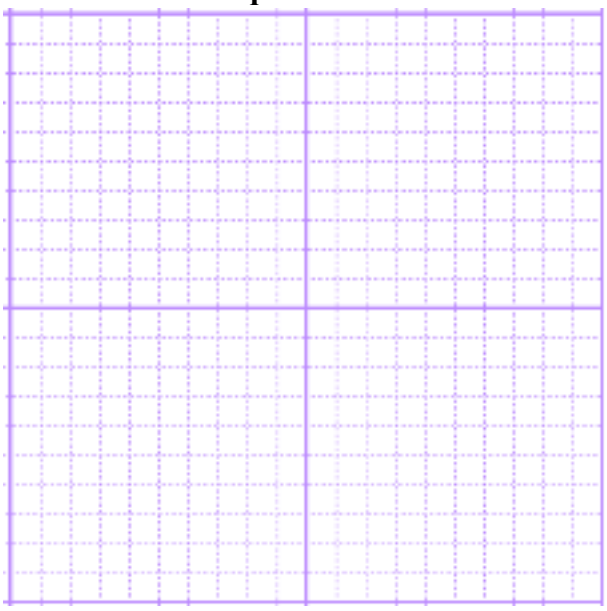
Problem 5 **Inequalities**



$y \leq \frac{-3}{4}x + 3$

$x - 2y \geq 2$

Problem 6 **Inequalities**



$y \leq \frac{-1}{2}x + 2$

$y > \frac{3}{1}x - 4$

Solve each system of equations using **substitution. Show your work!**

Problem 7

$2x - 3y = -7$

$x + 3y = 10$

Pt of Intersection _____

Problem 8

$x - 3y = 14$

$3x + 2y = -13$

Pt of Intersection _____

Problem 9

$5x + y = 4$

$x - 2y = 3$

Pt of Intersection _____

Problem 10

$x - 5y = -2$

$2x + 5y = -4$

Pt of Intersection _____

Problem 11

$-2x + y = -20$

$4x + 3y = 30$

Pt of Intersection _____

Solve each system of equations using **Linear Combination / Elimination. Show your work!**

Problem 12

$5x - y = -6$

$x - y = -2$ Pt of Intersection _____

Problem 13

$x + 4y = 12$

$2x - y = 15$ Pt of Intersection _____

Problem 14

$x - y = 9$

$5x + y = 33$ Pt of Intersection _____

Problem 15

$x = 3y + 14$

$3x + 2y = -2$ Pt of Intersection _____

Solve each system of equations using **Cramer's Rule. Show your work!**

Problem 16

$3x + y = 11$

$2x - y = 9$ Pt of Intersection _____

Problem 17

$x - 3y = 4$

$2x + 3y = -1$ Pt of Intersection _____

Problem 18

$-2x + y = -6$

$2x - 3y = 5$ Pt of Intersection _____

Problem 19

$2x + 4y = 2$

$3x - 2y = 11$ Pt of Intersection _____

Solve each system with the **method of your choosing**.

Problem 20

$y = 2x - 1$

$x + 2y = 13$

Pt of Intersection _____

Problem 21

$2x - 3y = -17$

$5x + 2y = -14$

Pt of Intersection _____

Problem 22

$3x + 2y = 19$

$x - 4y = 4$

Pt of Intersection _____

Problem 23

$2x - 8y = 30$

$x + 4y = 7$

Pt of Intersection _____

Solve each system with the **method of your choosing**.

Problem 24

$y = 3x + 2$

$6x + y = 8$

Pt of Intersection _____

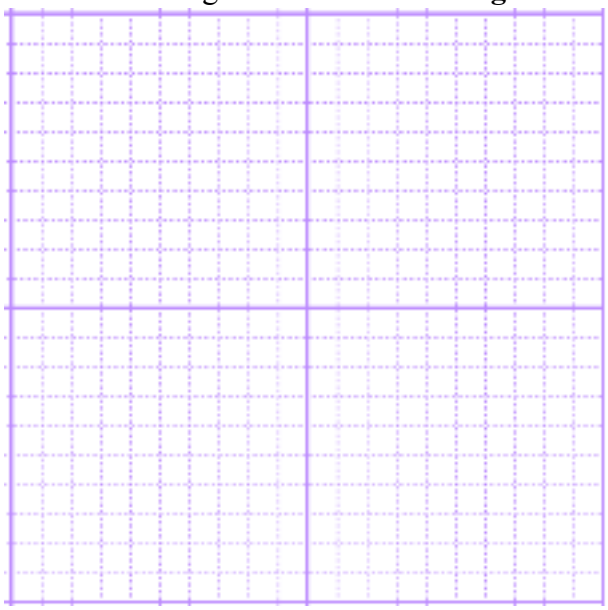
Problem 25

$2x + 3y = 14$

$4x - 2y = -12$

Pt of Intersection _____

Find the region with **four shadings**!



$y \leq \frac{-2}{3}x + 5$ $\quad\quad$ $3x - y < -7$

$y > \frac{1}{4}x - 4$ $\quad\quad$ $x - y \geq -6$