

Name _____

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

1) $x = 6 + y$
 $2x + y = 0$

2) $3x + 5y = 15$
 $x - y = 4$

3) $6x - 3y = 9$
 $\frac{y+3}{2} = x$

Solve each system of equations using the *elimination* method. Show your work!

4) $7y - 2x = 10$
 $2y + 2x = -1$

5) $2x - y = -1$
 $3x + 2y = 30$

6) $3x + 5y = 10$
 $2x - 3y = 4$

For each system, fill in the blanks with the number(s) you would need to multiply each equation by to *eliminate* (cancel) “y”. If an equation should not change, write “no change”.

7) _____ $2x - 8y = 1$
_____ $5x + 2y = -1$

8) _____ $x + \frac{1}{3}y = 9$
_____ $3x + y = 7$

9) _____ $x - 6y = 0$
_____ $6x - 4y = 3$

Solve each system of equations using the **graphing** method. Show your graphs, but write the solution in the blank! Solve for y on this page if necessary.

10) $x + 1 = y$
 $2x - 2y = 8$

11) $2x + 3y = 12$
 $y = 2x - 4$

12) $x + y = 6$
 $3x - 4y = 4$

Solution: _____

Solution: _____

Solution: _____

Solve each **system of inequalities**. Shade the proper area on the graph to show the solutions. Solve for y on this page if necessary.

13) $y + 2 \leq 7$
 $y + 4 \geq -3x$

14) $y > |x| - 2$
 $y < |x + 1| + 4$

15) $y \leq -2|x|$
 $x < 1$
 $3y + 3x \geq -9$

Solve each of these systems with whatever method you feel is best.

16) $8x + 3y + 5 = 0$
 $10x + 6y + 13 = 0$

17) $y = 2x - 3$
 $y = -\frac{1}{2}x + 2$

18) $\frac{x}{4} - \frac{y}{3} = 1$ and $\frac{1}{3}x - \frac{4}{9}y = \frac{4}{3}$