

DIRECTIONS: Solve these systems of equations using the substitution method or linear combination (dropout) method. You can use different methods on different problems.

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

$(2, 1)$

$$2. \begin{cases} 2x + y = 6 \\ 3x + 5y = 9 \end{cases}$$

$(3, 0)$

$$3. \begin{cases} 3x - 7y = 10 \\ x - 4y = 5 \end{cases}$$

$(1, -1)$

$$4. \begin{cases} 3x + y = 6 \\ 2x - 4y = 10 \end{cases}$$

$(\frac{17}{7}, -\frac{9}{7})$

$$5. \begin{cases} 4x + 6y = 8 \\ 3x + y = 9 \end{cases}$$

$(\frac{23}{7}, -\frac{6}{7})$

$$6. \begin{cases} x - 7y = 12 \\ 2x + 8y = 14 \end{cases}$$

$(\frac{97}{11}, -\frac{5}{11})$

$$7. \begin{cases} x - 3y = 18 \\ -x + 3y = 12 \end{cases}$$

No solution

$$8. \begin{cases} 2x + 5y = 1 \\ x + \frac{5}{2}y = \frac{1}{2} \end{cases}$$

Infinitely many solutions

$$9. \begin{cases} -3x + 4y = 1 \\ x = 2y + 1 \end{cases}$$

$(-3, -2)$

$$10. \begin{cases} 5x - 2y = 6 \\ -10x + 4y = -12 \end{cases}$$

Infinitely many solutions

$$11. \begin{cases} -2x + y = 8 \\ -6x + 3y = 12 \end{cases}$$

No solution

$$12. \begin{cases} 5x - 2y = -20 \\ 6x + y = -7 \end{cases}$$

$(-2, 5)$

$$13. \begin{cases} x - y - 12 = 0 \\ 2x + 1 = -3y \end{cases}$$

$(7, -5)$