Name: _____

Algebra 2

1-02 Solve Linear Systems Algebraically

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Substitution

1. Solve one equation for _____ variable
2. Use that expression to _____ that variable in the _____ equation
3. _____ the new equation
4. _____ back into the _____ equation
5. _____ for the second variable

Solve $\begin{cases} y = x + 2 \\ 2x + y = 8 \end{cases}$

Solve $\begin{cases} 3x + 2y = 8 \\ x + 4y = -4 \end{cases}$

Elimination

1. _____ up the equations into _____
2. Multiply _____ or _____ equations by numbers so that one variable has the same _____ , but opposite _____
3. _____ the equations
4. _____ the resulting equation
5. _____ the value into one _____ equation and solve

Solve $\begin{cases} 2x - 3y = -14 \\ 3x - y = -7 \end{cases}$

Solve $\begin{cases} 3x + 11y = 4 \\ -2x - 6y = 0 \end{cases}$

Number of Solutions

- If _____ variables _____ after you substitute or combine and
- You get a _____ statement like 2 = 2 → _____ solutions
- You get a _____ statement like 2 = 5 → _____ solution

Summary of Solving Techniques

- When to graph?
    - To get _____ picture and _____
- When to use substitution?
    - When _____ of the coefficients is 1
- When to use elimination?
    - When _____ of the coefficients is 1

    Worksheet