

YOUR NAME: _____

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Read each problem **very carefully** before starting to solve it. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [3 points] Use the addition method to solve the system $\begin{cases} 2x + 3y = 18 \\ 3x - 2y = -25 \end{cases}$.

2. [4 points] Solve the system $\begin{cases} -x^2 + y = 2 \\ -4x + y = -1 \end{cases}$.

3. [4 points] Graph the solution set of the system $\begin{cases} y \leq -x^2 + 8 \\ y \geq 2x + 5 \end{cases}$.

Please, show clearly (and label) all intersection points.

4. [4 points] Decompose the rational expression $\frac{12}{x^2 - 4x - 5}$ into partial fractions.