Types of Solutions Produced By a Linear and Quadratic System

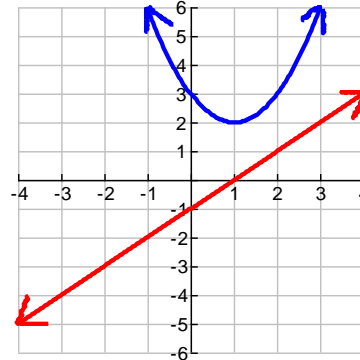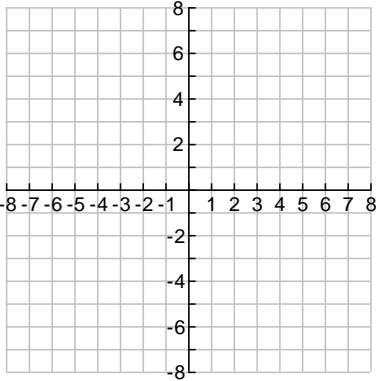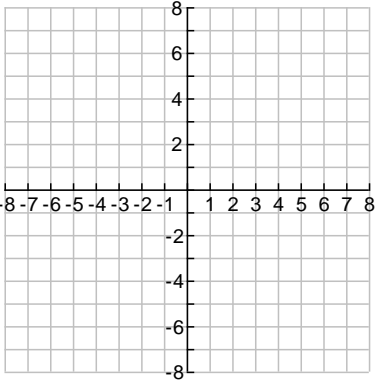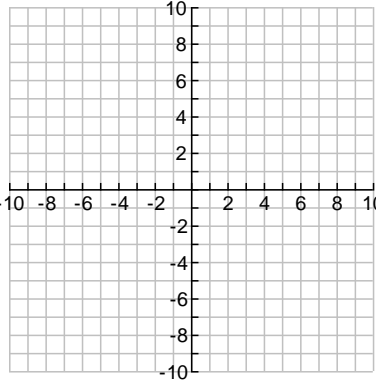**Example 1:** $\begin{cases} y = x^2 - 2x - 3 \\ y = 2x - 3 \end{cases}$

Number of Solution(s): _____

What are the solutions?

Example 2: $\begin{cases} y = -(x+2)^2 + 5 \\ y = 5 \end{cases}$

Number of Solution(s): _____

What are the solutions?

Example 3: $\begin{cases} y = x^2 - 2x + 4 \\ y = x - 1 \end{cases}$
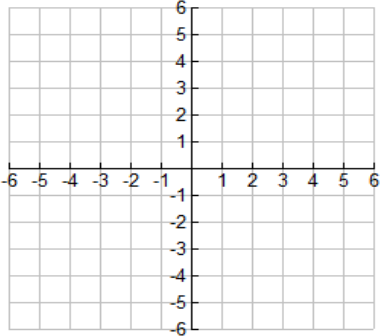

Number of Solution(s): _____
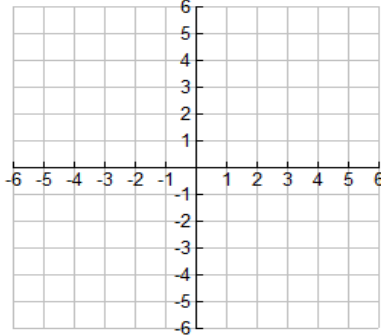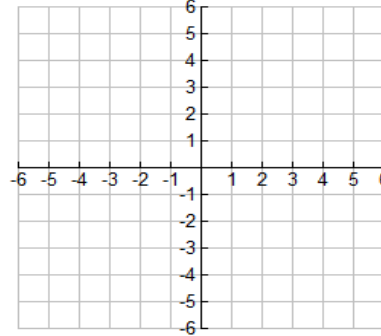
What are the solutions?
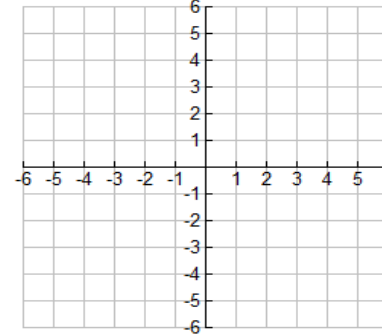
Solving Linear and Quadratic System By Graphing Examples

Example 4a: $\begin{cases} y = (x+2)^2 - 6 \\ y = 4x - 2 \end{cases}$

Solution(s): _____

Example 5a: $\begin{cases} y = x^2 - 2x - 3 \\ y = -5 \end{cases}$

Solution(s): _____

Example 6a: $\begin{cases} y = -x^2 + 2x + 7 \\ y = -2x + 2 \end{cases}$

Solution(s): _____

Solving Linear and Quadratic System By Substitution (Rework Examples Above) Examples

Example 4b: $\begin{cases} y = (x+2)^2 - 6 \\ y = 4x - 2 \end{cases}$

Example 5b: $\begin{cases} y = x^2 - 2x - 3 \\ y = -5 \end{cases}$

Example 6b: $\begin{cases} y = -x^2 + 2x + 7 \\ y = -2x + 2 \end{cases}$

Math 2 – Linear and Quadratic Systems of Equations WS   Name: _____

I. Solve each linear and quadratic system BY GRAPHING. State the solution(s) on the line. Must be ACCURATE!

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

2.) $\begin{cases} y = -x^2 - 6x - 6 \\ y = 3 \end{cases}$

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

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

Solution(s): _____

Solution(s): _____

Solution(s): _____

Solution(s): _____

II. Solve each linear and quadratic system BY SUBSTITUTION. State the solution(s) on the line. Must SHOW WORK!

5.) $\begin{cases} y = x^2 + 5x - 2 \\ y = 3x - 2 \end{cases}$ → Solution(s): _____

6.) $\begin{cases} y = -x^2 - 3x + 2 \\ y = x + 6 \end{cases}$ → Solution(s): _____

7.) $\begin{cases} y = -2x^2 - 4x - 1 \\ y = 2x + 4 \end{cases}$ → Solution(s): _____

8.) $\begin{cases} x + y = 5 \\ y + 1 = 3x^2 + 2x \end{cases}$ → Solution(s): _____

9.) $\begin{cases} x^2 + y - 8 = 0 \\ x + y - 2 = 0 \end{cases}$ → Solution(s): _____

10.) $\begin{cases} 5x + y = 2x^2 + 6 \\ y + 4x = 7x - 2 \end{cases}$ → Solution(s): _____