Name _____

9-7 Reteach to Build Understanding

Solving Systems of Linear and Quadratic Equations

1. Label each method used to solve the given system of equations. Then identify the solution of the system.

_____

$$\begin{cases} y = x^2 - 1 \\ y = 4x - 5 \end{cases}$$

$$y = x^2 - 1$$
$$-\,y = 4x - 5$$
$$0 = x^2 - 4x + 4$$
$$0 = (x - 2)^2$$
$$x - 2 = 0$$
$$x = 2$$
$$y = 4(2) - 5$$
$$y = 3$$

The solution of this system is _____.

_____

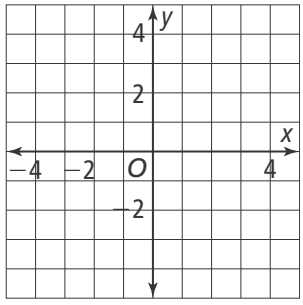
$$\begin{cases} y = x^2 + 2x \\ y = 2x - 3 \end{cases}$$

$$2x - 3 = x^2 + 2x$$
$$-3 = x^2$$

The solution of this system is _____.

_____

$$\begin{cases} y = x^2 - 4 \\ y = -x + 2 \end{cases}$$



The solutions of this system are _____ and _____.

2. A student made an error when using the elimination method to solve the system of equations. Find and correct the error the student made.

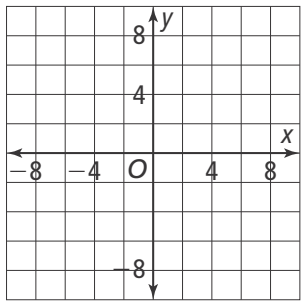
$$\begin{cases} y = 3x^2 + 2 \\ y = -3x + 2 \end{cases}$$

$$y = 3x^2 + 2$$
$$-\,y = -3x + 2$$
$$0 = 3x^2 + 3x$$
$$0 = 3x(x + 1)$$
$$3x = 0 \text{ or } x + 1 = 0$$
$$x = 0 \qquad x = -1$$

The solutions of this system are 0 and –1.

3. Solve the linear–quadratic system using graphing.

$$\begin{cases} y = x^2 + 5x \\ y = 2x + 4 \end{cases}$$



The solutions of the linear–quadratic system are (____ , ____) and (____ , ____)