9-3

Solving a system of linear and quadratic equations algebraically

Objective: I can solve a system of linear and/or quadratic equations algebraically

Warm-Up

Solve the system algebraically $\begin{cases} y = 2x + 1 \\ y = -x + 3 \end{cases}$

Solve for x: $x^2 - 2x - 24 = 0$

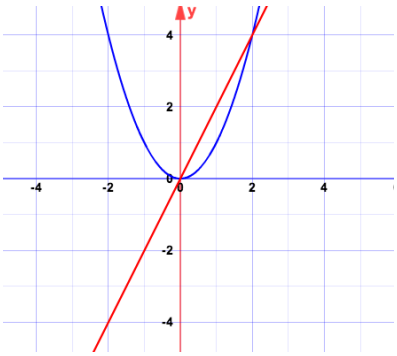
How can we SOLVE if we don't get integer solutions graphically?

When solving a system of linear equations algebraically, what methods can we use to solve?

What are all the different ways we know how to SOLVE a QUADRATIC equation?

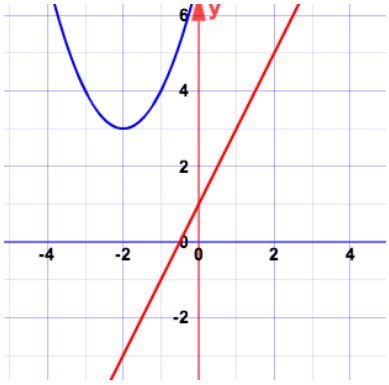
Find the real solutions of the given system algebraically :

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



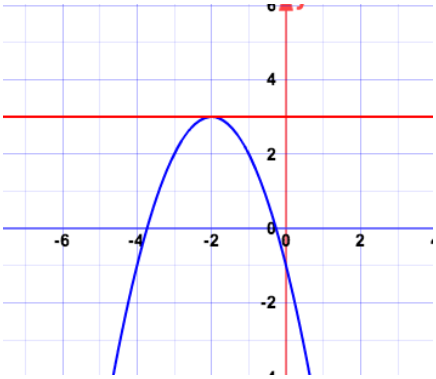
Find the real solutions of the given system algebraically :

$$\begin{cases} y = x^2 + 4x + 7 \\ y = 2x + 1 \end{cases}$$



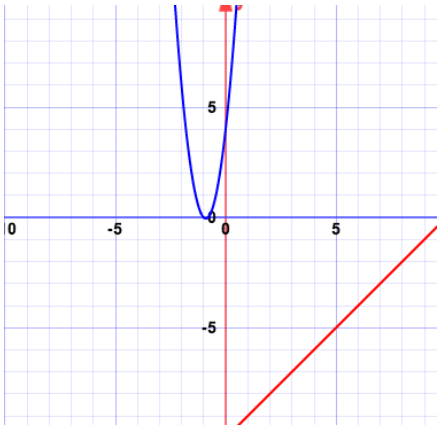
Find the real solutions of the given system algebraically :

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



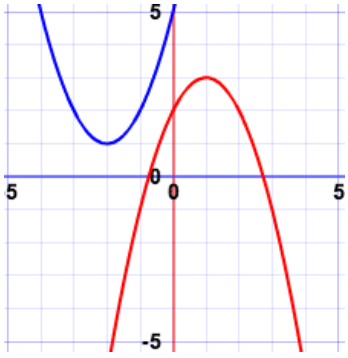
Find the real solutions of the given system algebraically :

$$\begin{cases} y = 5x^2 + 9x + 4 \\ y = x - 10 \end{cases}$$



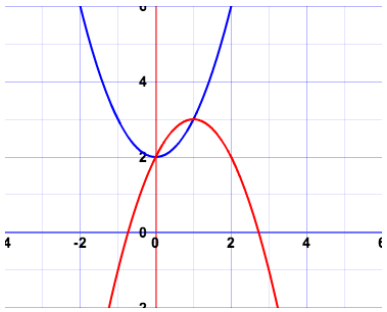
Find the real solutions of the given system algebraically :

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



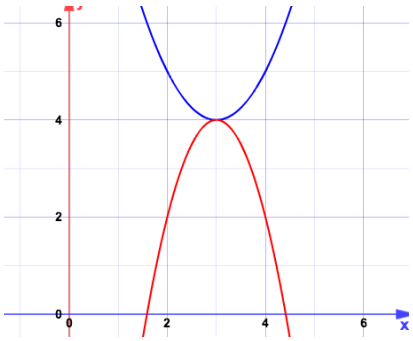
Find the real solutions of the given system algebraically :

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



Find the real solutions of the given system algebraically :

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



Find the real solutions of the given system algebraically :

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