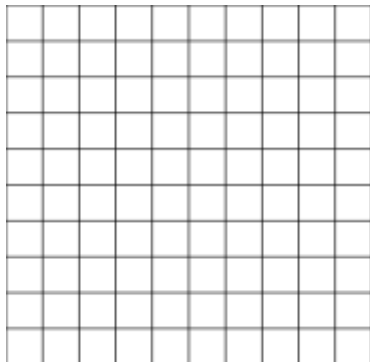


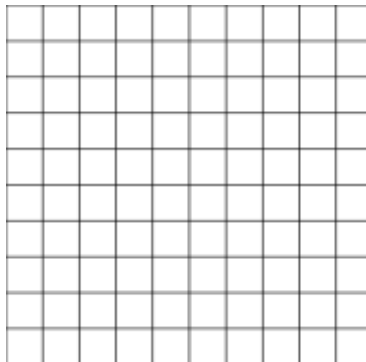
Systems of Linear and Quadratic Equations Assignment

Solve each system of equations by graphing.

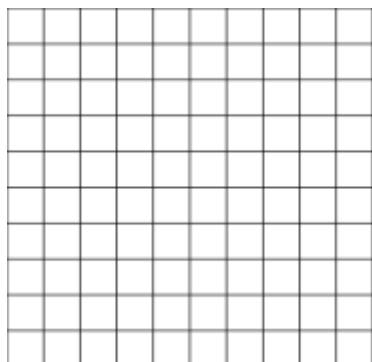
1. $y = x^2 + x - 3$; $y = x + 1$



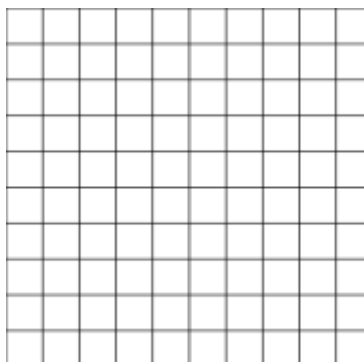
2. $y = x^2 + x - 3$; $y = x + 1$



3. $y = -x^2 + 5x - 5$; $y = x - 2$



4. $y = x^2 + 2x$; $y = 3x$



Systems of Linear and Quadratic Equations Assignment

Solve each system of equation algebraically.

1. $y = x^2 - 3x - 27$; $y = x - 6$

2. $y = x^2 - 6$; $y = -7x + 12$

Name: _____ Period: _____ Date: _____

Systems of Linear and Quadratic Equations Assignment

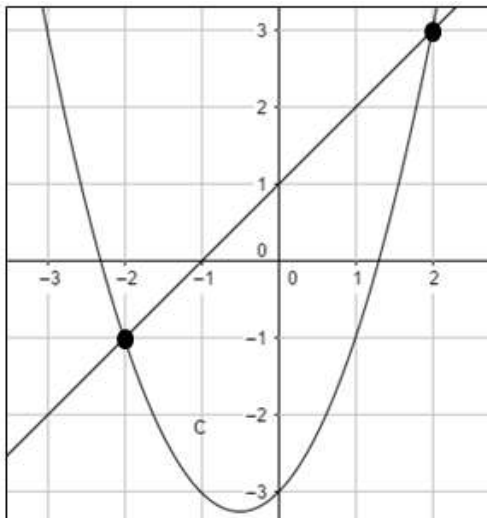
3. $y = x^2 - 6x - 35$; $y = x + 25$

4. $y = 4$; $y = x^2 + 3x$

Systems of Linear and Quadratic Equations Assignment

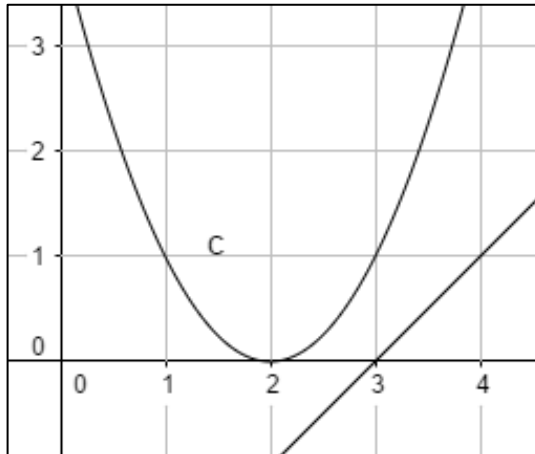
Solve each system of equations by graphing.

1. $y = x^2 + x - 3$; $y = x + 1$



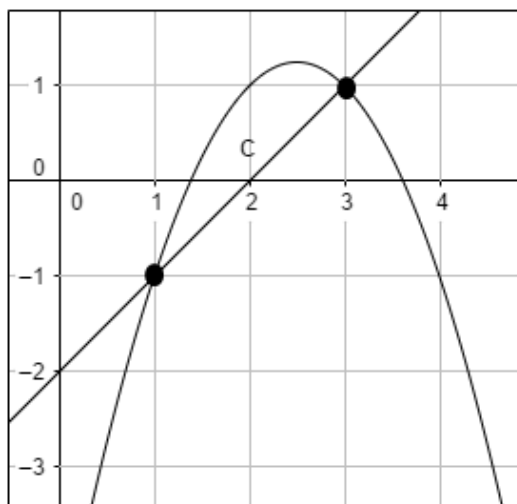
The points where two graphs intersect are **$(-2, -1)$ and $(2, 3)$** .

2. $y = x^2 + x - 3$; $y = x + 1$



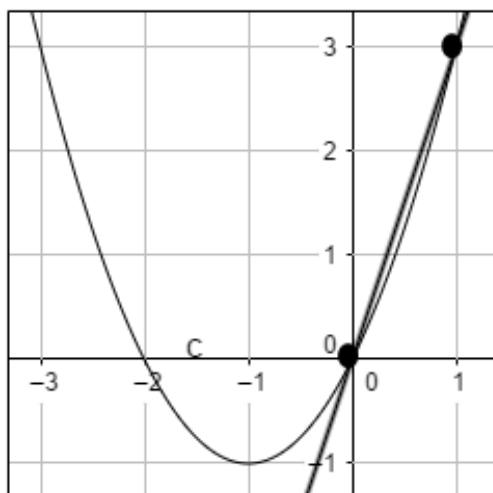
The two graphs do not intersect each other at any point. So there is no solution for the system.

3. $y = -x^2 + 5x - 5$; $y = x - 2$



The points where two graphs intersect are **$(1, -1)$ and $(3, 1)$** .

4. $y = x^2 + 2x$; $y = 3x$



The points where two graphs intersect are **$(0, 0)$ and $(1, 3)$** .

Systems of Linear and Quadratic Equations Assignment

Solve each system of equation algebraically.

1. $y = x^2 - 3x - 27$; $y = x - 6$

First put the value of y from linear equation into the quadratic equation.

$$x - 6 = x^2 - 3x - 27 \rightarrow x^2 - 3x - 27 - x + 6 = 0$$

$$\rightarrow x^2 - 4x - 21 = 0$$

$$\rightarrow x^2 - 7x + 3x - 21 = 0$$

$$\rightarrow (x - 7)(x + 3) = 0$$

$$\rightarrow x = 7, x = -3$$

$$y = 7 - 6 = 1 ; y = -3 - 6 = -9$$

Solutions: $(7, 1)$, $(-3, -9)$

2. $y = x^2 - 6$; $y = -7x + 12$

First put the value of y from linear equation into the quadratic equation.

$$-7x + 12 = x^2 - 6 \rightarrow x^2 + 7x - 18 = 0$$

$$\rightarrow x^2 + 9x - 2x - 18 = 0$$

$$\rightarrow (x + 9)(x - 2) = 0$$

$$\rightarrow x = -9, x = 2$$

$$y = -7(-9) + 12 = 75 ; y = -7(2) + 12 = -2$$

Solutions: $(-9, 75)$, $(2, -2)$

Systems of Linear and Quadratic Equations Assignment

3. $y = x^2 - 6x - 35$; $y = x + 25$

First put the value of y from linear equation into the quadratic equation.

$$x + 25 = x^2 - 6x - 35 \rightarrow x^2 - 7x - 60 = 0$$

$$\rightarrow x^2 - 12x + 5x - 60 = 0$$

$$\rightarrow (x - 12)(x + 5) = 0$$

$$\rightarrow x = 12, x = -5$$

$$y = 12 + 25 = 37 \quad ; \quad y = -5 + 25 = 20$$

Solutions: **(12, 37)** , **(-5, 20)**

4. $y = 4$; $y = x^2 + 3x$

First put the value of y from linear equation into the quadratic equation.

$$4 = x^2 + 3x \rightarrow x^2 + 3x - 4 = 0$$

$$\rightarrow x^2 + 4x - x - 4 = 0$$

$$\rightarrow (x + 4)(x - 1) = 0$$

$$\rightarrow x = -4, x = 1$$

Solutions: **(-4, 4)** , **(1, 4)**