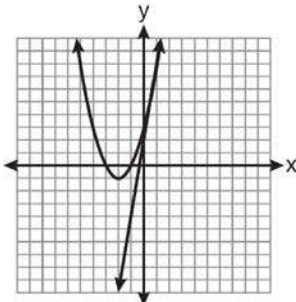


A.G.9: Quadratic-Linear Systems 1: Solve systems of linear and quadratic equations graphically

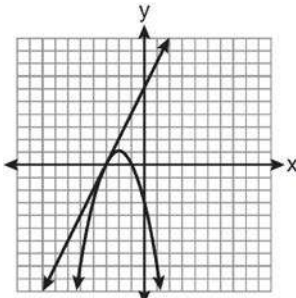
- 1 Which graph could be used to find the solution of the system of equations $y = 2x + 6$ and

$$y = x^2 + 4x + 3?$$

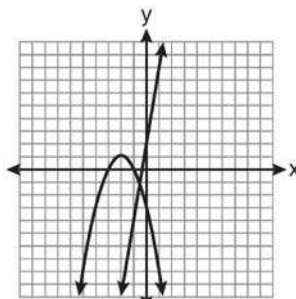
1)



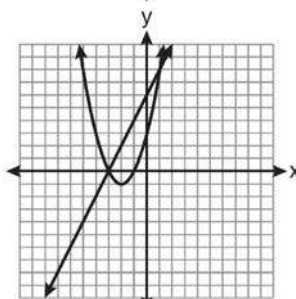
2)



3)



4)

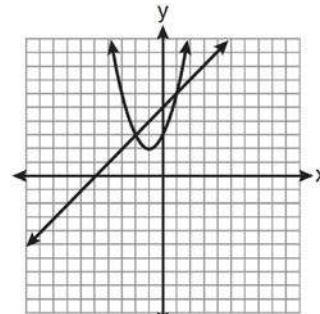


- 2 Which graph can be used to find the solution of the following system of equations?

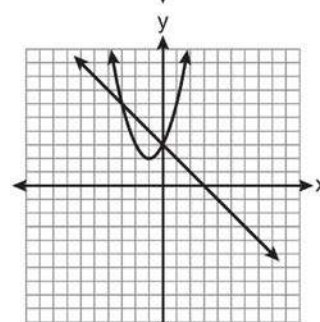
$$y = x^2 + 2x + 3$$

$$2y - 2x = 10$$

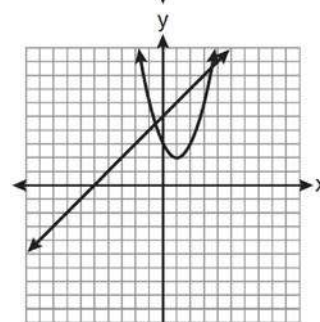
1)



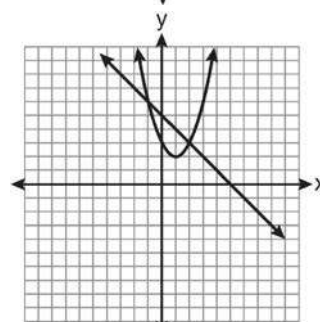
2)



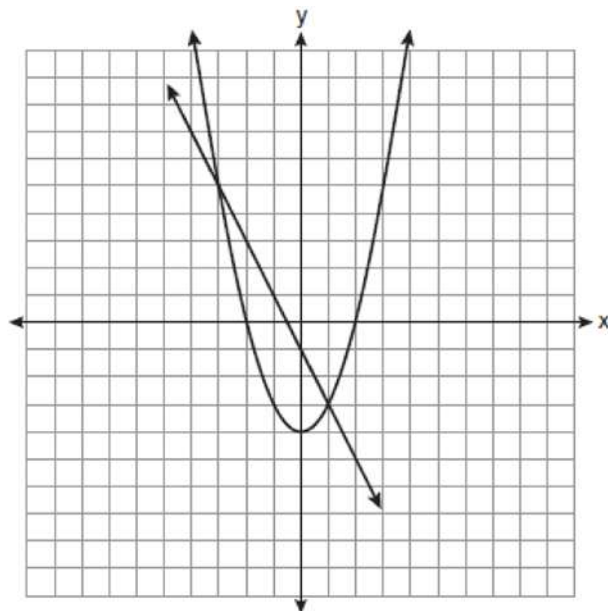
3)



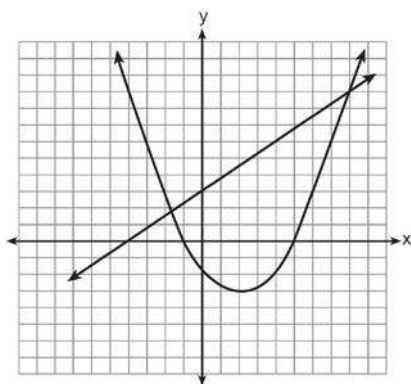
4)



- 3 Which ordered pair is a solution of the system of equations shown in the graph below?



- 1) $(-3, 1)$
 - 2) $(-3, 5)$
 - 3) $(0, -1)$
 - 4) $(0, -4)$
- 4 Two equations were graphed on the set of axes below.



Which point is a solution of the system of equations shown on the graph?

- 1) $(8, 9)$
- 2) $(5, 0)$
- 3) $(0, 3)$
- 4) $(2, -3)$

- 5 How many solutions are there for the following system of equations?

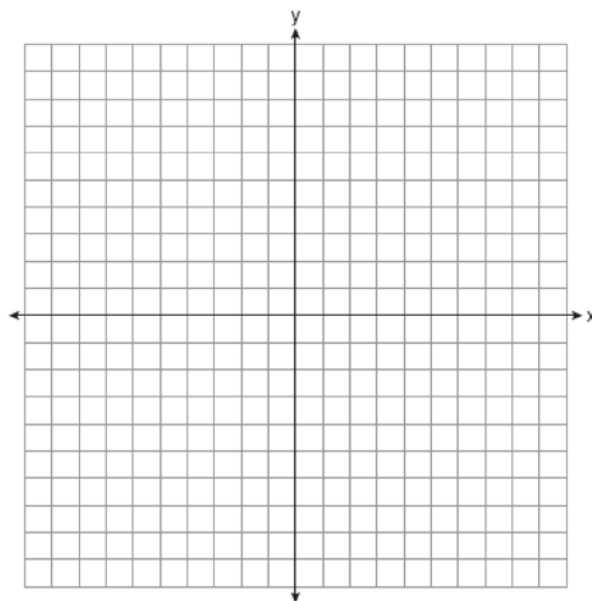
$$y = x^2 - 5x + 3$$

$$y = x - 6$$

- 1) 1
 - 2) 2
 - 3) 3
 - 4) 0
- 6 On the set of axes below, solve the following system of equations graphically and state the coordinates of all points in the solution set.

$$y = x^2 + 4x - 5$$

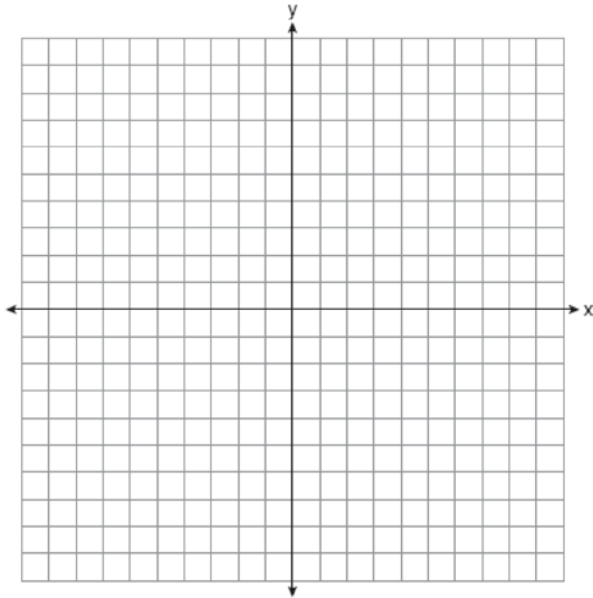
$$y = x - 1$$



- 7 On the set of axes below, solve the following system of equations graphically for all values of x and y . State the coordinates of all solutions.

$$y = x^2 + 4x - 5$$

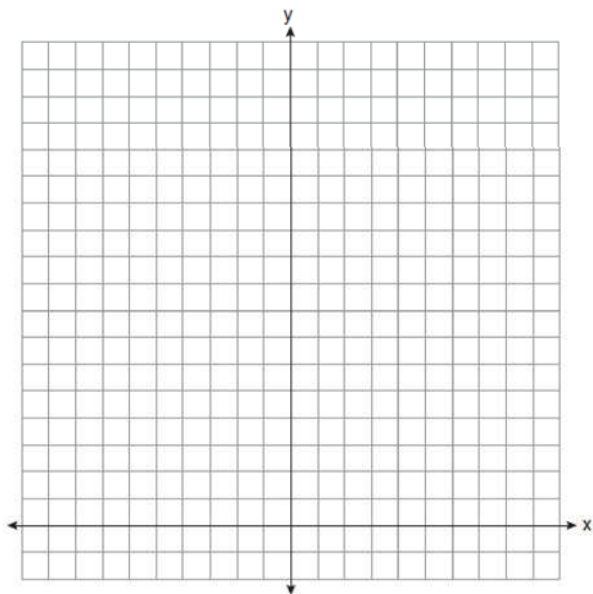
$$y = 2x + 3$$



- 8 On the set of axes below, solve the following system of equations graphically for all values of x and y .

$$y = -x^2 - 4x + 12$$

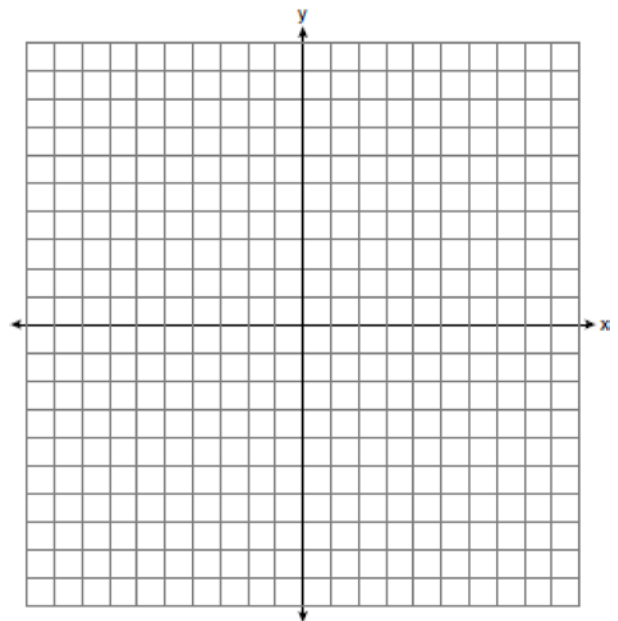
$$y = -2x + 4$$



- 9 Solve the following systems of equations graphically, on the set of axes below, and state the coordinates of the point(s) in the solution set.

$$y = x^2 - 6x + 5$$

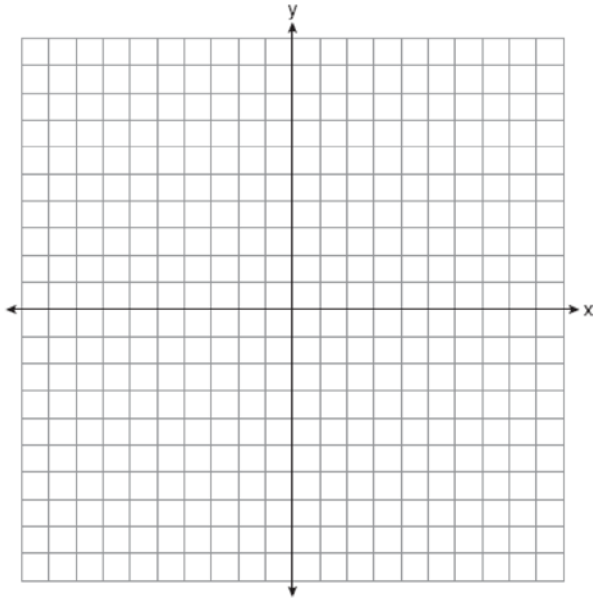
$$2x + y = 5$$



- 10 On the set of axes below, solve the following system of equations graphically for all values of x and y .

$$y = x^2 - 6x + 1$$

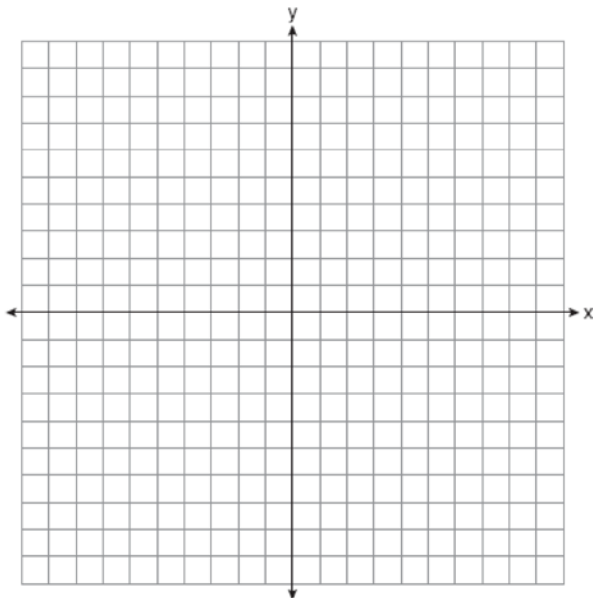
$$y + 2x = 6$$



- 11 On the set of axes below, solve the following system of equations graphically and state the coordinates of *all* points in the solution set.

$$y = -x^2 + 6x - 3$$

$$x + y = 7$$

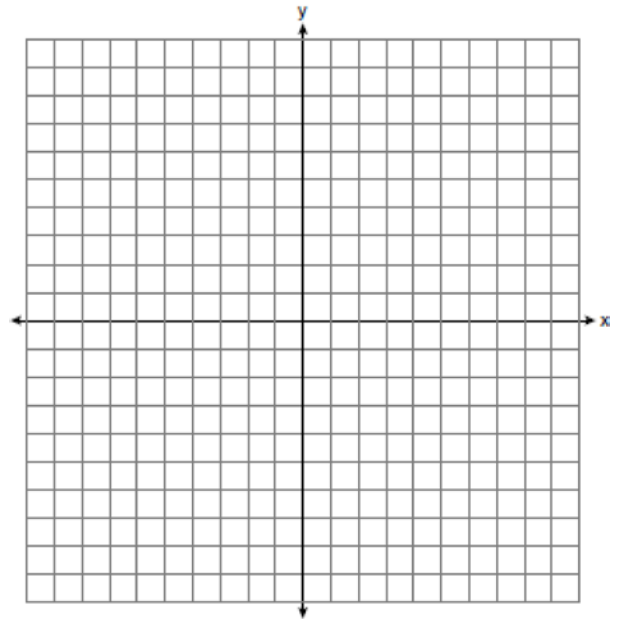


- 12 On the set of axes below, graph the following system of equations.

$$y + 2x = x^2 + 4$$

$$y - x = 4$$

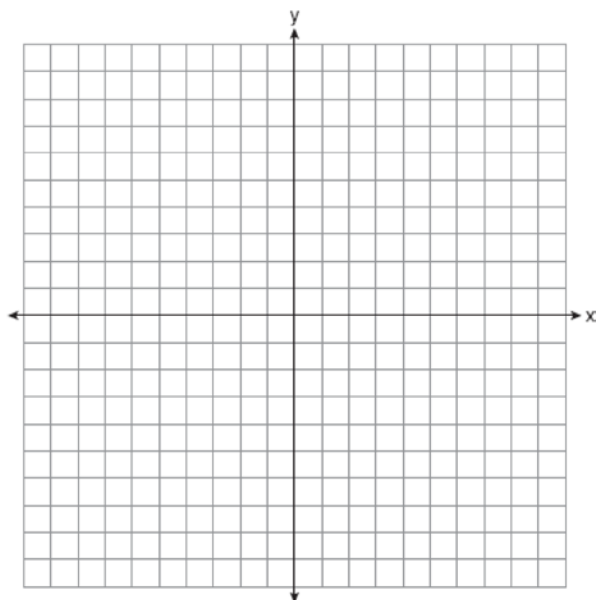
Using the graph, determine and state the coordinates of *all* points in the solution set for the system of equations.



- 13 On the set of axes below, graph the following system of equations. Using the graph, determine and state *all* solutions of the system of equations.

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

$$y + 1 = -2x$$



A.G.9: Quadratic-Linear Systems 1: Solve systems of linear and quadratic equations graphically

Answer Section

1 ANS: 4 REF: 011102ia

2 ANS: 1

$$2y - 2x = 10 \quad \text{axis of symmetry: } x = \frac{-b}{2a} = \frac{-2}{2(1)} = -1$$

$$2y = 2x + 10$$

$$y = x + 5$$

REF: 081010ia

3 ANS: 2 REF: 011012ia

4 ANS: 1 REF: 011207ia

5 ANS: 1

$$x^2 - 5x + 3 = x - 6 \quad y = 3 - 6 = -3 \quad (3, -3)$$

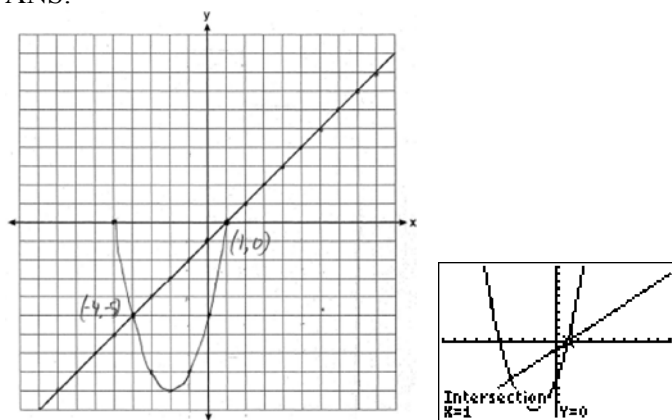
$$x^2 - 6x + 9 = 0$$

$$(x - 3)^2 = 0$$

$$x = 3$$

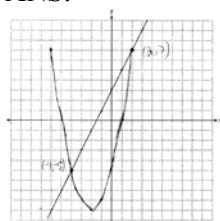
REF: 061330ia

6 ANS:



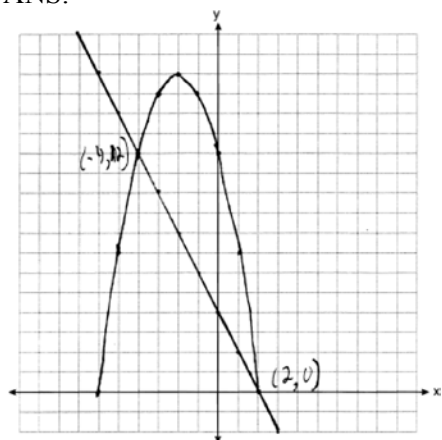
REF: 080839ia

7 ANS:



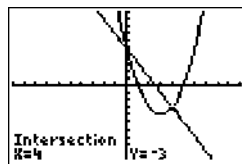
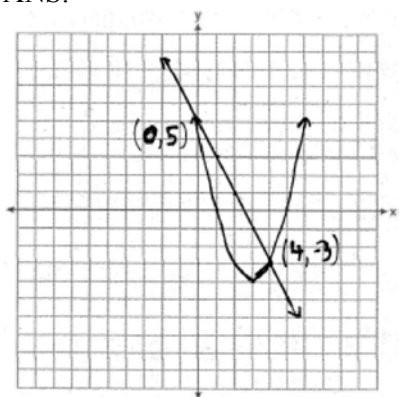
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8 ANS:



REF: 061039ia

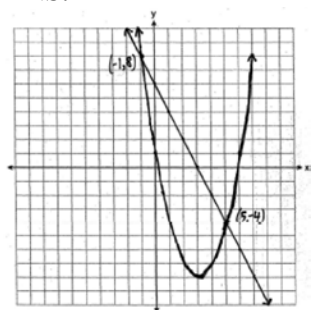
9 ANS:



X	Y ₁	Y ₂
0	5	5
4	-3	-3
X=0		

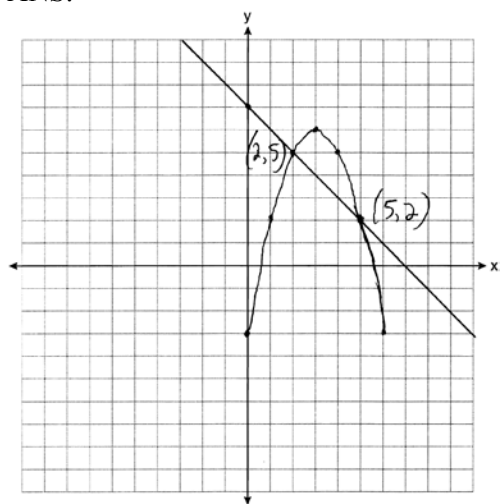
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10 ANS:



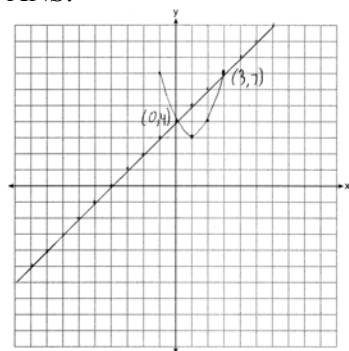
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11 ANS:



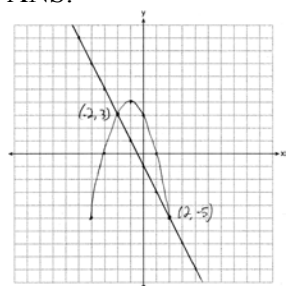
REF: 081138ia

12 ANS:



REF: 011339ia

13 ANS:



REF: 081337ia