NAME:_____
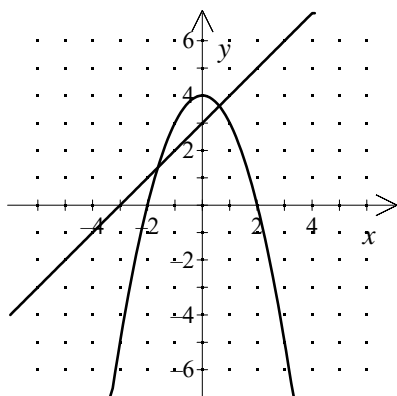
1.  Which system of equations is graphed below?



[A]  $y = -x^2 - 4$
    $y = x + 3$

[B]  $y = x^2 - 4$
    $y = x + 3$

[C]  $y = x^2 + 4$
    $y = x + 3$

[D]  $y = -x^2 + 4$
    $y = x + 3$

[E]  $y = x^2 - 4$
    $y = 3x$

[1] _____

2.  How many solutions does this system of equations have?
$$y = -2x^2$$
$$y = x + 4$$

[A] two     [B] none    [C] three

[D] one     [E] infinitely many

[2] _____

3.  Solve the system of equations.
$$y = |x| - 1$$
$$y = -x^2 + 1$$

[A] (1, 0), (–1, 0)    [B] (1, 0), (0, –2)

[C] (–3, 1), (–1, 0)    [D] (–3, 1), (0, –2)

[3] _____

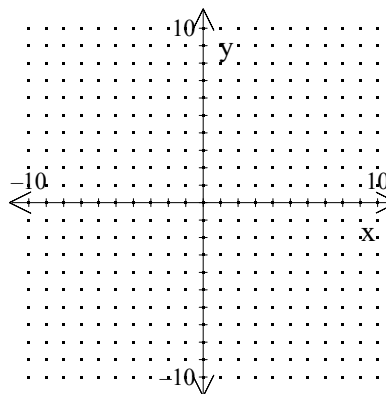4.  Solve the system of equations.
$$y = |x| - 10$$
$$y = -x^2 - 4$$

[A] (–4, –7), (–2, –8)

[B] (–4, –7), (–1, –10)

[C] (2, –8), (–2, –8)    [D] (2, –8), (–1, –10)

[4] _____

5.  Use a graphing calculator to solve the following system of equations. Sketch the graph.
$$y = 4x + 1$$
$$y = |x - 1|$$



[5] _____

6. Compare the quantities in Column A and Column B.

   Column A                      Column B

   the number of solutions of    the number of solutions of

   the system of equations       the system of equations

   $y = |2x|$                    $y = 2x^2$

   $y = 2x$                      $y = 2x$

   [A]  The quantity in Column A is greater.          [B]  The quantity in Column B is greater.

   [C]  The quantities are equal.

   [D]  The relationship cannot be determined from the information given.

   [6]  _____

7. Solve the system of equations.

   $y = |x| - 3$

   $y = x + 5$

   [7]  _____

8. Solve the system of equations.

   $y = |x| + 2$

   $y = -x + 4$

   [8]  _____

9. Solve the system of equations.

   $y = |x| - 3$

   $y = -x + 5$

   [9]  _____
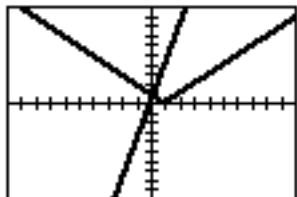
[1]  D

[2]  B

[3]  A

[4]  C



[5]  (0, 1)

[6]  A

[7]  (−4, 1)

[8]  (1, 3)

[9]  (4, 1)