

Algebra 2  
Quiz 3.4-3.6

NAME \_\_\_\_\_

Write the letter for the best answer.

Solve the equation by using the Quadratic Formula.

1.  $x^2 + 2x - 24 = 0$

A. -4, 6

B. 4, -6

C. -8, 12

D. 8, -12

2.  $2x^2 - 4x = 3$

A.  $\frac{2 \pm \sqrt{10}}{2}$

B.  $\frac{2 \pm i\sqrt{2}}{2}$

C.  $\frac{1 \pm 2\sqrt{10}}{2}$

D.  $\frac{4 \pm \sqrt{8}}{4}$

3.  $2x^2 - 9 = 10x$

A.  $\frac{-12 \pm 5\sqrt{3}}{2}$

B.  $\frac{-12 \pm 3\sqrt{43}}{2}$

C.  $\frac{-6 \pm \sqrt{43}}{2}$

D.  $\frac{-6 \pm \sqrt{7}}{2}$

Solve the system by Graphing.

4.  $y = x^2 - 2x + 4$   
 $y = 4x - 1$

A. (2, 4)

B. (0, 4)

C. (1, 3)

D. (2, 2)

5.  $y = 2x^2 - 8x + 5$   
 $y = 2x - 3$

A. (1, 0) and (4, 6)

B. (1, -1) and (4, 5)

C. (0, -1) and (3, 5)

D.  $\emptyset$

Solve the system using Substitution.

6.  $y = -2x^2 + 4x - 1$   
 $y = 2x - 5$

A. (2, -1) and (-1, -7)

B. (2, -3) and (-1, -5)

C. (3, -1) and (-2, -7)

D.  $\emptyset$

7.  $y = x^2 - 4x + 6$   
 $4x - 2 = x^2 + y$

A. (1, 2)

B. (2, 2)

C. (1, 1)

D.  $\emptyset$

Solve the system by Elimination.

8.  $6x^2 + 4x - y = 4$   
 $3x^2 - x - y = 2$

A. (2, 28) and  $(-\frac{1}{3}, -\frac{14}{3})$

B. (2, 29) and  $(-\frac{4}{3}, -\frac{11}{3})$

C. (2, 30) and  $(-\frac{1}{4}, -\frac{19}{4})$

D.  $\emptyset$

9.  $y = 2x^2 - x + 1$   
 $y = 4x + 4$

A. (2, 10) and  $(-\frac{5}{2}, 3)$

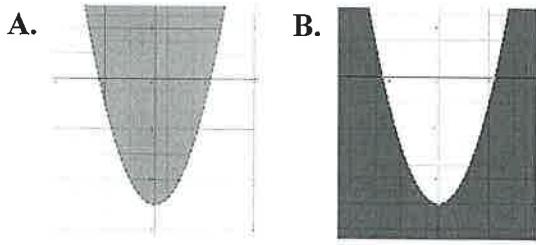
B. (-2, 11) and (-1, 3)

C. (3, 16) and  $(-\frac{1}{2}, 2)$

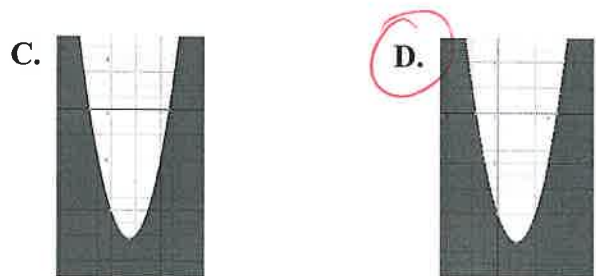
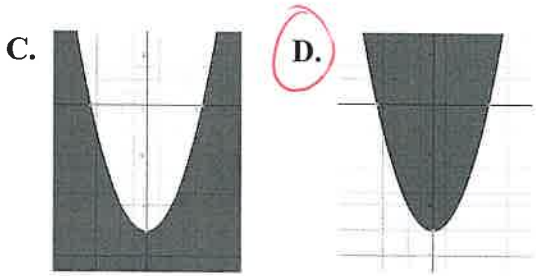
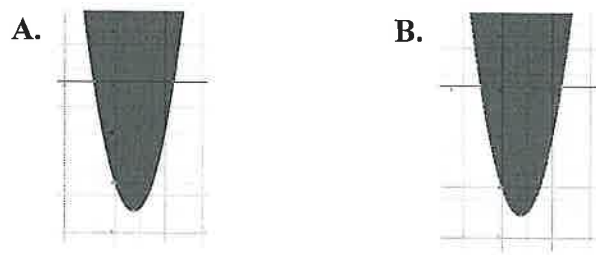
D.  $\emptyset$

Graph the inequality.

10.  $y \geq x^2 - 5$



11.  $y < 2x^2 - 3x - 4$



Simplify the inequality algebraically.

12.  $x^2 - 3x - 18 \geq 0$

- A.  $x \leq -3$  or  $x \geq 6$
- B.  $x \leq 6$  or  $x \geq -3$
- C.  $-3 \leq x \leq 6$
- D.  $6 \leq x \leq -3$

13.  $3x^2 - 13x + 4 < 0$

- A.  $4 < x < \frac{1}{3}$
- B.  $\frac{1}{3} < x < 4$
- C.  $x < \frac{1}{3}$  or  $x > 4$
- D.  $x > \frac{1}{3}$  or  $x < 4$