

Worksheet 3.6B  
Algebra 2

Solve the inequality algebraically.

Solving Quadratic Inequalities

L151

Solve each quadratic inequality.

1)  $-x^2 - 5x + 6 > 0$

2)  $-x^2 - 12x - 11 \leq 0$

3)  $x^2 - 1 < 0$

4)  $x^2 - 2x - 3 \geq 0$

5)  $x^2 + 4x - 5 > 0$

6)  $x^2 - 5x - 6 < 0$

7)  $-x^2 + 3x + 10 \leq 0$

8)  $x^2 + 8x - 9 \geq 0$

Solve the inequality algebraically.

**Solving Quadratic Inequalities**

L251

Solve each quadratic inequality.

1)  $18x^2 + 23x + 5 \leq 0$

2)  $12x^2 + 10x - 12 > 0$

3)  $-9x^2 + 29x - 6 \geq 0$

4)  $4x^2 + 20x - 11 < 0$

5)  $7x^2 + 11x + 4 > 0$

6)  $17x^2 + 15x - 2 \geq 0$

7)  $5x^2 - 15x + 10 < 0$

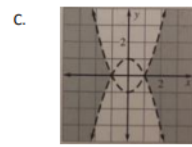
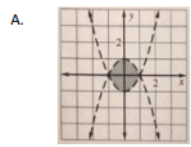
8)  $-8x^2 + 6x - 1 \leq 0$

Match the system of inequalities with its graph.

1.  $y < x^2 + 1$   
 $y > -x^2 + 1$

2.  $y < x^2 - 1$   
 $y > -x^2 + 1$

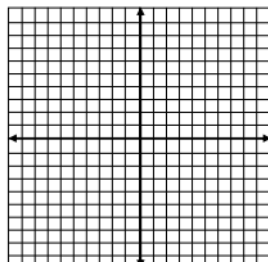
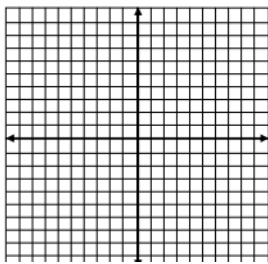
3.  $y > x^2 - 1$   
 $y < -x^2 + 1$



Graph the system of inequalities.

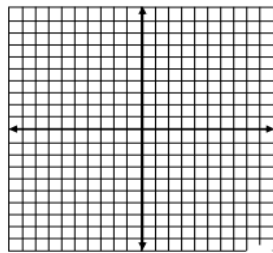
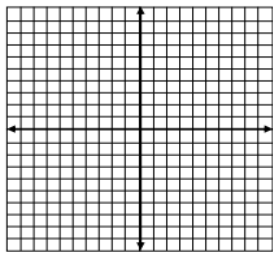
4.  $y \geq x^2$   
 $y \leq -x^2 + 3$

5.  $y \leq -x^2 + 4$   
 $y \geq x^2 + 2x + 1$



6.  $y > x^2 + 4x + 1$   
 $y \leq -x^2 - 2x + 1$

7.  $y \geq 2x^2 - 12x + 16$   
 $y < -x^2 + 2x + 3$



8.  $y < x^2 + 5$   
 $y > 2x^2 - 4$

9.  $y > x^2 - x$   
 $y < x^2 + 3$

