

4.9B/C Quadratic Inequalities

Period _____

Use sign analysis to solve each inequality. SHOW WORK. Write solution in interval notation.

1) $x^2 - 4x - 32 \geq 0$

2) $a^2 - 49 < 0$

3) $-n^2 - 2n + 48 < 0$

4) $m^2 - 4m + 3 \geq 0$

5) $n^2 + 6n > 0$

6) $-x^2 + 5x - 4 < 0$

Solve each using a graphing calculator. Show a sketch of your graph please.

7) $9x^2 + 7x - 14 \leq 0$

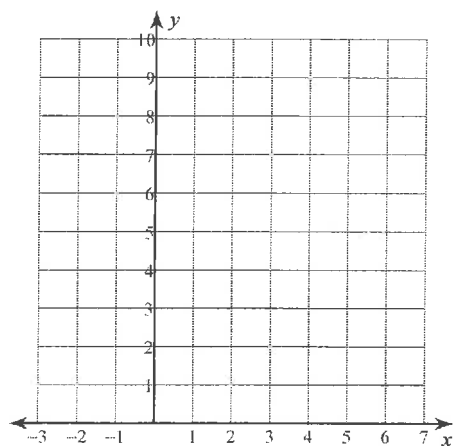
8) $5x^2 - 6x - 5 \geq 0$

$$9) \ 6p^2 - 5p - 25 > 0$$

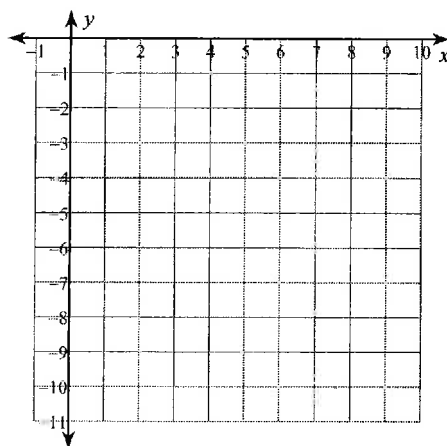
$$10) \ 6b^2 + 9b + 1 \geq 0$$

Sketch the graph of each function.

$$11) \ y > 2x^2 - 8x + 9$$

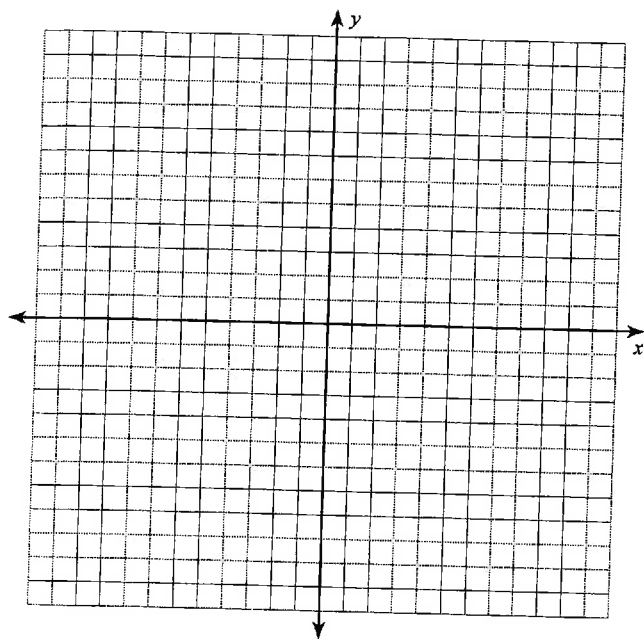


$$12) \ y \leq -2(x - 4)^2 - 2$$

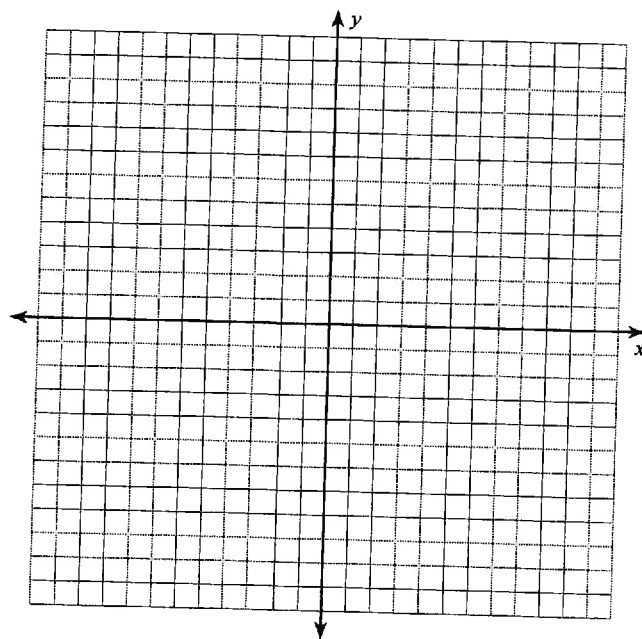


Graph each system of inequalities.

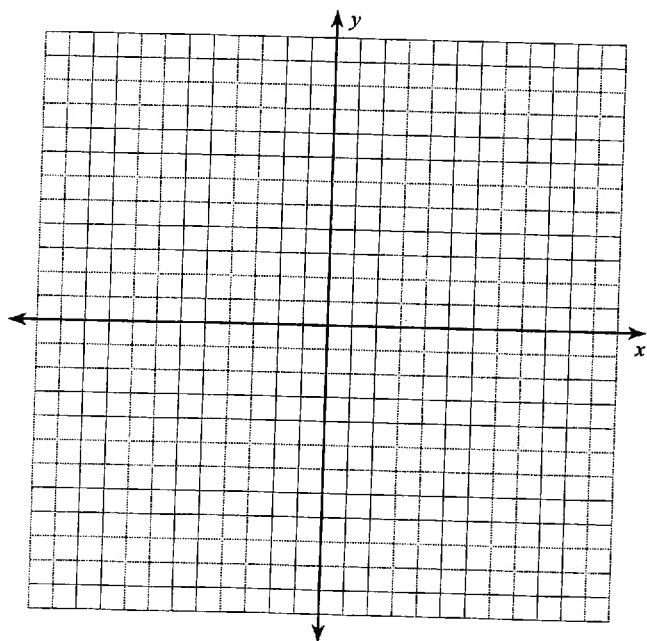
13) $y < -2x^2 - 4x - 3$
 $y > -3x^2 - 18x - 30$



14) $y \leq -2x^2 - 4x + 1$
 $y < 2x^2 + 8x + 5$



15) $y > -(x - 4)^2 + 2$
 $y \geq -2x^2 - 8x - 9$



16) $y \geq (x + 1)^2 - 3$
 $y \leq x^2 + 2x + 4$

