

**3.6****Practice A**

In Exercises 1–4, graph the inequality.

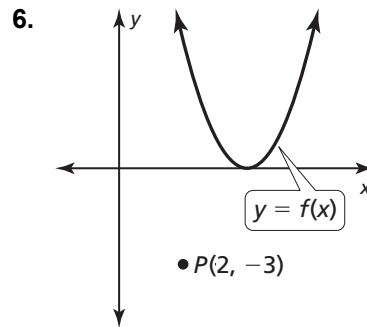
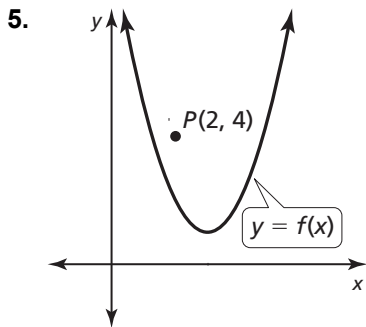
1.  $y > x^2$

2.  $y \leq -3x^2$

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

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

In Exercises 5 and 6, use the graph to write an inequality in terms of  $f(x)$  so point  $P$  is a solution.



In Exercises 7 and 8, graph the system of quadratic inequalities.

7.  $y \leq -2x^2$

8.  $y < 4x^2$

$y > x^2 - 3$

$y < 2x^2 - 4$

In Exercises 9–12, solve the inequality algebraically.

9.  $9x^2 > 16$

10.  $x^2 - 8x + 7 \geq 0$

11.  $x^2 + 10x \leq -21$

12.  $2x^2 - 11x < -9$

In Exercises 13–16, solve the inequality by graphing.

13.  $x^2 - 2x + 2 > 0$

14.  $x^2 + 5x - 3 \leq 0$

15.  $x^2 + 6x \leq -5$

16.  $x^2 + 4x > -1$

17. An oceanfront lot has a perimeter of 250 feet and an area of at least 2500 square feet.

- Write an inequality describing this situation.
- Describe the possible widths of the oceanfront lot.