

Practice A

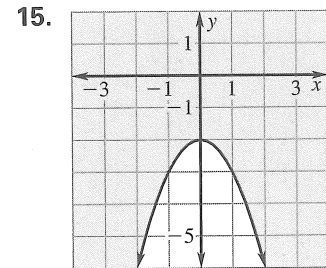
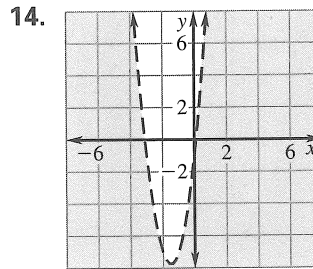
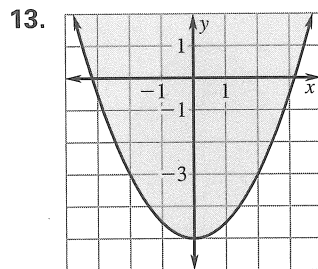
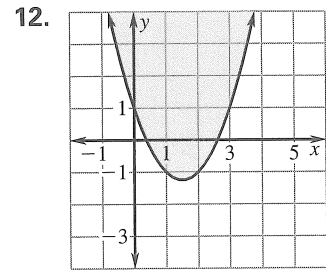
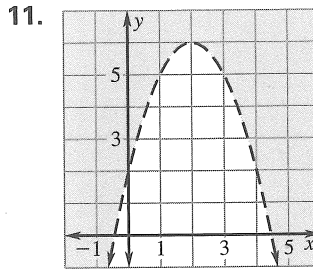
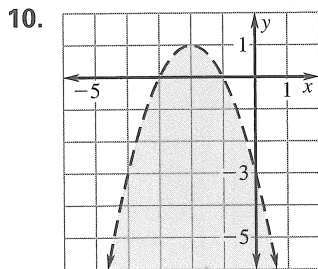
For use with pages 548–553

Decide whether the ordered pair is a solution of the inequality.

1. $y > x^2 + 6x$, (1, 7)
2. $y < 3x^2 - 8x$, (2, -1)
3. $y \leq x^2 - 5x - 6$, (0, -10)
4. $y \geq -x^2 + 2x - 3$, (-3, 0)
5. $y > -8x^2 + 4x - 6$, (-1, -2)
6. $y \leq -2x^2 - 11x - 4$, (-4, 9)
7. $y < 2x^2 - 3x + 4$, (-1, -8)
8. $y \geq 2x^2 + 5x + 3$, (3, 12)
9. $y \leq 4x^2 + 3x + 8$, (4, 82)

Match the graph with its inequality.

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|------------------------|--------------------------------|------------------------|
| A. $y > -x^2 + 4x + 2$ | B. $y \geq \frac{1}{2}x^2 - 5$ | C. $y < -x^2 - 4x - 3$ |
| D. $y \geq -x^2 - 2$ | E. $y \geq x^2 - 3x + 1$ | F. $y < 3x^2 + 9x - 1$ |



Sketch the graph of the inequality.

- | | | |
|------------------------|----------------------------|---------------------------|
| 16. $y \leq x^2 + 4$ | 17. $y > -x^2 - 2$ | 18. $y \geq -x^2 + 6$ |
| 19. $y < -2x^2 + 8$ | 20. $y \leq 3x^2 + 5x$ | 21. $y \leq x^2 + 5x + 6$ |
| 22. $y > x^2 - x - 12$ | 23. $y \geq -x^2 + 3x - 4$ | 24. $y < 2x^2 - 5x + 3$ |

25. **Water Use** For 1940 to 1980, the daily water use W (in billions of gallons) in the United States followed the quadratic model

$$W = 0.050t^2 + 6.109t + 130.727$$

where $t = 0$ represents 1940. Suppose this model had been used to predict the water use for 1980 through 1995. The actual use in 1995 was 402 billion gallons. Was this less or more than the predicted consumption for 1995? Explain.

