

Section 9.3 Extra Practice

1. Which ordered pairs are solutions to the given inequality?

a) $y > -x^2 + 4x - 3$

A (2, 1) B (0, 0) C (3, -2) D (1, 1)

b) $y \geq x^2 + 6x - 4$

A (-2, -7) B (0, 0) C (2, 5) D (-7, 2)

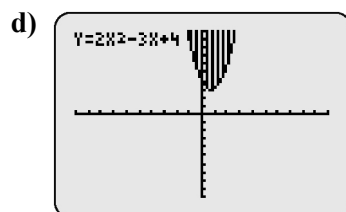
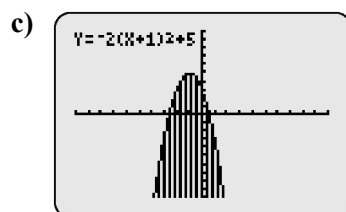
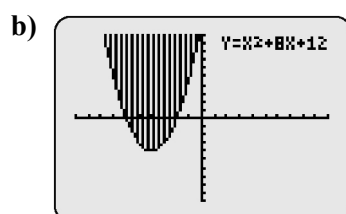
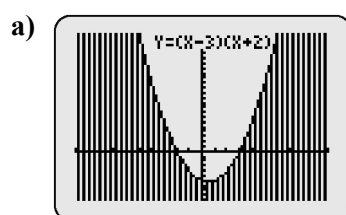
c) $y \leq 3(x - 1)^2 + 4$

A (1, 5) B (0, 7) C (-1, 9) D (3, 18)

d) $y < (3x - 1)(x + 2)$

A (-2, 0) B (1, 3) C (-5, 10) D (0, 5)

2. Write an inequality to describe each graph. The given equation for each boundary is part of the solution.



3. Graph each quadratic inequality.

a) $y < (x - 5)^2 + 4$

b) $y > (2x + 1)^2$

c) $3y \leq (x - 1)^2 + 6$

d) $y - 4 \geq 3(x + 2)^2$

4. Graph each quadratic inequality.

a) $y > -x^2 - 3x - 4$

b) $y < (x - 5)(x + 7)$

c) $y \geq 6x^2 - x - 1$

d) $-2y \geq x^2 - 1$

5. The stone archway shown can be defined by $10x^2 + 9y - 90 = 0$. Write an inequality to represent the region below the archway.

