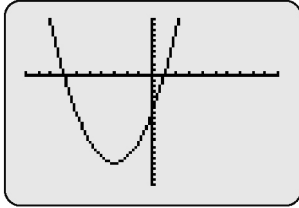
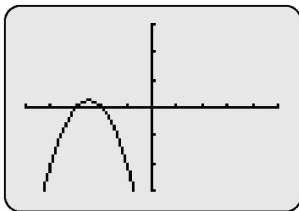


Section 9.2 Extra Practice

1. Given the graph of $f(x) = (x - 1)(x + 7)$, solve the following.



- a) $(x - 1)(x + 7) = 0$
 b) $(x - 1)(x + 7) > 0$
 c) $(x - 1)(x + 7) < 0$
2. For the graph of $f(x) = -x^2 - 5x - 6$, determine each solution.



- a) $-x^2 - 5x - 6 = 0$
 b) $-x^2 - 5x - 6 > 0$
 c) $-x^2 - 5x - 6 < 0$
3. Is the value of x a solution to the given inequality? Show your work.
- a) $x^2 + 3x > -5, x = 0$
 b) $(x - 4)(x + 3) \leq 7, x = 0$
 c) $2x - 3 > x^2 + x, x = 1$
 d) $3x^2 + x - 9 \geq 0, x = -2$

4. Determine the solution to each inequality.

- a) $(x - 1)(x + 5) > 0$
 b) $0 \geq (x - 1)^2 - 4$
 c) $3(x + 1)(2x - 3) \leq 0$
 d) $2x(x - 2) \leq 4$

5. Solve each inequality.

- a) $4x^2 + 18 > 17x$
 b) $-8x^2 + 2x + 15 \geq 0$
 c) $x^2 - x + 2 \leq 0$
 d) $4x^2 - 12x + 9 \leq 0$

6. Determine the solution to each inequality.

- a) $x^2 + 4x + 3 > 2x^2$
 b) $x(x - 3) \leq 5$
 c) $(x - 1)(x + 5) \geq 1$
 d) $x^2 - 2x - 3 \geq 2x^2 + 9x + 4$

7. Given the function $f(x) = x^2 + 6x$,

- a) determine the zeros of the function
 b) solve the inequality $f(x) > 0$
 c) solve the inequality $f(x) \leq -5$

