1. Given the graph of \( y = -2x^2 + 6x + 1 \)
   a) estimate the zeros from the graph
   b) find the exact solution algebraically

2. Given the graph of \( y = x^3 - 4x \):
   determine:
   a) the intervals over which it is increasing
   b) the intervals over which it is decreasing
   c) the intervals over which \( f(x) \) is positive
   d) the intervals over which \( f(x) \) is negative

3. Given \( f(x) \) and \( g(x) \) with \( f(x) \) graphed with a solid line, and \( g(x) \) with a dotted line
   a) for what values of \( x \) is \( f(x) = g(x) \)?
   b) for what values is \( f(x) > g(x) \)?
   c) find \( f(-2) \)
   d) find \( g(3) \)

Section 2.7
4. Determine whether each of the following graphs has symmetry about the x-axis, the y-axis, the origin, or none of the above:
   a) b) c) d)

5. Given part of the graph of \( f(x) \) and that it has symmetry about the origin, complete the graph:

Answers:
1. b) \( \frac{3 \pm \sqrt{11}}{2} \)
2. a) \( (-\infty, -1), (1, \infty) \)
   b) \( (-1, 1) \)
2. c) \( (-2, 0), (2, \infty) \)
   d) \( (-\infty, -2), (0, 2) \)
3. a) \( x = -2, 0, 3 \)
   b) \( (-\infty, -2), (0, 3) \)
   c) 2
   d) 0
4. a) origin
   b) y-axis
   c) x-axis, y-axis, origin