Below are the answers to the even problems. Answers to odd problems are in the book.

2.1:
46) \( \frac{1}{a+1}, \frac{1}{a+h+1}, \frac{1}{(a+1)(a+h+1)} \)
58) \((-\infty,-3) \cup (-3,2) \cup (2,\infty)\)
64) \((-\infty,-2] \cup [2,\infty)\)

2.2:
54) Not a function.

2.3:
7) EXTRA \([-3,-1.4) \cup (1.2,4]\)
8a) 3, 2, -2, 1, 0 b) Domain: \([-4,4]\), Range \([-2,3]\) c) -4 d) (-1, -1.8)

2.6
14a) The graph of \( y = 1 - f(-x) \) can be obtained by reflecting the graph of \( y = f(x) \) about the \( x \)-axis, then reflecting about the \( y \)-axis, then shifting upward one unit.
22a) The graph of \( g(x) = -\sqrt{x} + 1 \) is obtained by reflecting the graph \( f(x) = \sqrt{x} \) about the \( x \)-axis, then shifting the resulting graph upward by one unit.
22b) The graph of \( g(x) = \sqrt{-x} + 1 \) is obtained by reflecting the graph \( f(x) = \sqrt{x} \) about the \( y \)-axis, then shifting the resulting graph upward by one unit.
26) Graph IV.
28) Graph III.
30)

86) Even
90) Odd
3.6:
23) EXTRA $x = -8, x = 4$
32) Vertical asymptotes: $x = -1, x = 1$; Horizontal asymptote: $y = 0$; EXTRA $x = \frac{7}{3}, x = 3$

2.7:
58) $(f \circ g)(x) = 2 + \frac{4}{x}$, Domain = $(-\infty, -2) \cup (-2, 0) \cup (0, \infty)$;
$(g \circ f)(x) = \frac{1}{1+x}$, Domain = $(-\infty, -1) \cup (-1, 0) \cup (0, \infty)$.
$(f \circ f)(x) = x$, and the domain is $(-\infty, 0) \cup (0, \infty)$.
$(g \circ g)(x) = \frac{x}{3x+4}$, Domain = $(-\infty, -2) \cup (-2, -\frac{4}{3}) \cup (-\frac{4}{3}, \infty)$.

2.8:
40) $f(g(x)) = x$ and $g(f(x)) = x$. The functions $f$ and $g$ are inverses of each other by the Inverse Function Property.
49) $D_f = R_{f^{-1}} = (-\infty, \infty)$, $D_{f^{-1}} = R_f = (-\infty, \infty)$
53) $D_f = R_{f^{-1}} = (-\infty, -2) \cup (-2, \infty)$ and $D_{f^{-1}} = R_f = (-\infty, 0) \cup (0, \infty)$
55) $D_f = R_{f^{-1}} = (-\infty, -4) \cup (-4, \infty)$ and $D_{f^{-1}} = R_f = (-\infty, 1) \cup (1, \infty)$
61) $D_f = R_{f^{-1}} = [0, \infty)$ and $D_{f^{-1}} = R_f = (-\infty, 4]$ 
67) $D_f = R_{f^{-1}} = \left[ -\frac{5}{8}, \infty \right)$ and $D_{f^{-1}} = R_f = [0, \infty)$
68) $D_f = R_{f^{-1}} = [-3, \infty)$ and $D_{f^{-1}} = R_f = [2, \infty)$

Chapter 2 Review:
84 a) $(f \circ g)(x) = x$ b) $(g \circ f)(x) = |x|$ c) 2 d) 26