Please let me know if you find any typos or errors in the answers below.

Section 1.1:
16, $x \neq 1$
18, $\mathbb{R}$
20, $\mathbb{R}$
22, $t \neq 2$
24, $s \leq -2$ or $s \geq 2$
28, $4x^2$
30, $\frac{1}{x^2+x-2}$
40, $f(g(x)) = x^2 - 2x + 2, g(f(x)) = -x^2$, they could never never be equal.
44, $x^2 + 2x + 6$
48, $\frac{3}{x} + 2x$
70, a. $H(2) = 192$; b. $|H(3) - H(2)| = 80$; c. $H(0) = 256$; d. when $t = 4$

Section 1.2:
8, $6\sqrt{2}$
10, $\frac{\sqrt{89}}{40}$
12, a. polynomial; b. different; c. rational; d. rational
16, x-intercept: 1; y-intercept: 1
18, x-intercept: 2/3; y-intercept: 2
22, x-intercept: -4 and 2; y-intercept: -8
26, x-intercept: 1/2; y-intercept: -1
28, x-intercept: none; y-intercept: 9
36, a. 2; b. 1 and 3; c. 4, -1; d. -1, 2
40, monthly profit: $(1560 - 12p)(p - 20) = -12p^2 + 1800p - 31200$; optimal price: 75;
46, a. 15; c. when $t = 25$; maximum height: 9985