Chapter 4 Review Extra Practice Answers

1. a) $x = -2, -1, 3$
  b) $x = -4, -2, 1, 2$
  c) $x = -1, 2, 3$
  d) $x = -3, -2, 1$
  e) $x = -4, 1$
  f) $x = -2, 1, 2$

2. a) $x = -6.97$
  b) $x = -2.96, 1.28$
  c) $x = -2.17, 0, 1.84$
  d) $x = -0.74, 1$
  e) $x = -1.32$
  f) $x = 1.48, 6.95$

3. a) $\{x \in \mathbf{R} \mid x > 2\}$
  b) $\{x \in \mathbf{R} \mid x < -4\}$
  c) $\{x \in \mathbf{R} \mid x \leq 5\}$
  d) $\{x \in \mathbf{R} \mid x \geq 3\}$
  e) $\{x \in \mathbf{R} \mid x < 1\}$
  f) $\{x \in \mathbf{R} \mid x \geq -10\}$

4. a) $x = 2$ is a solution and $x \in (-1, 7)$
  b) $x = 2$ is a solution and $x \in (-6, 2]$
  c) $x = 2$ is not a solution and $x \in (2, 8)$
  d) $x = 2$ is not a solution and $x \in [3, 15]$
  e) $x = 2$ is not a solution and $x \in (1, 2)$
  f) $x = 2$ is a solution and $x \in \left[\dfrac{7}{4}, \dfrac{5}{2}\right]$

5. a) $x \in (-2, 4)$
  b) $x \in (-\infty, 2]$ and $x \in [5, \infty)$
  c) $x \in (-6, 1)$ and $x \in (1, \infty)$
  d) $x \in (-\infty, -4]$ and $x \in [-1, 0]$ and $x \in [6, \infty)$
  e) $x \in (-\infty, -1)$ and $x \in (3, 4)$
  f) $x \in [2, 4]$ and $x = 0$

6. a) $x \in (-\infty, -6)$ and $x \in (-2, 7)$
  b) no solution
  c) $x \in (-3, 2)$
  d) $x \in (-3, 0)$ and $x \in (1, 2)$
  e) $x \in (-3, 0)$ and $x \in (1, 2)$
  f) $x \in (-\infty, -2)$ and $x \in (-1, 0)$ and $x \in (0, 2)$

7. a) -3
  b) -1
  c) 5
  d) -8
  e) 0
  f) 0

8. a) -3
  b) -2
  c) 1.39
  d) 0.18
  e) 2
  f) 18