

Math 150 Week in Review 3 Answer Key

1. (a) $y = \frac{7}{4}x + 3$
(b) $y = 0$ (the x -axis)
2. (a) $C = \frac{5}{3}T - 60$
(b) \$10 higher
3. $y = -5x + 10$
4. (a) Not a function
(b) Is a function
(c) Is a function
5. (a) $(-\infty, -3) \cup (3, \infty)$
(b) $(-\infty, -7) \cup (-7, -2] \cup [8, \infty)$
6. (a) $\frac{x^2 + 1}{x(2x - 1)}$
(b) $\frac{x^4 + 1}{x^2 + 2}$
7. (a) See Full Solutions for graph.
(b) Domain: $(-\infty, 4)$; Range: $[0, 1] \cup [\frac{5}{2}, \infty)$
(c) Increasing on $(0, 1)$; Decreasing on $(-\infty, -1) \cup (-1, 0)$
8. See Full Solutions for graph.
9. (a) Range: $[-54.6444, \infty)$
(b) Increasing on $(-1.1030, 1) \cup (3.8530, \infty)$; Decreasing on $(-\infty, -1.1030) \cup (1, 3.8530)$
10. (a) $\frac{1}{5}$
(b) $6 + h$
(c) $\frac{-5}{(a - 4)(a + h - 4)}$
11. (a) 22 ft/s
(b) 46 ft/s
12. $3a^2 + 3ah + h^2 + 6$ ft/s