

Math 150 Week-in-Review 2 Answer Key

1. 10 hours
2. 4 ounces
3. 8×12
4. 6 mph
5. (a) $[-11, -1)$
 (b) $(-\infty, -\frac{17}{7}) \cup [-\frac{5}{7}, \infty)$
 (c) $[-\frac{6}{5}, 2]$
 (d) $(-\infty, -2) \cup (-\frac{5}{3}, \infty)$
 (e) $(-\infty, -2) \cup (\frac{1}{2}, 1] \cup [3, \infty)$
6. For speeds v such that $0 \leq v < 30$: $[0, 30)$
7. See full solutions from live review.
8. Distance: $\sqrt{122}$, Midpoint: $(\frac{1}{2}, \frac{3}{2})$
9. Show that $d(A, B)^2 + d(B, C)^2 = d(A, C)^2$. Area of triangle is 28. (See full solutions.)
10. (a) x -intercepts: $x = 1$
 y -intercepts: None
 Symmetric with respect to x -axis.
 (b) x -intercepts: $x = 2$
 y -intercepts: $y = 8$
 Does not have any type of symmetry.
 (c) x -intercepts: $x = \pm\frac{3}{4}$
 y -intercepts: $y = -4$
 Symmetric with respect to y -axis.
 (d) x -intercepts: $x = 0$
 y -intercepts: $y = 0, \pm 2$
 Symmetric with respect to origin.
11. (a) $(x - 5)^2 + (y + 6)^2 = 144$
 (b) $(x - 6)^2 + (y - 2)^2 = 17$
12. (a) Center: $(2, 0), r = 6$
 (b) Center: $(0, -6), r = 8$
 (c) Center: $(\frac{3}{2}, -\frac{5}{4}), r = \frac{\sqrt{69}}{4}$
13. (a) $y = \frac{7}{4}x + 3$
 (b) $y = 0$ (the x -axis)

14. $y = -5x + 10$

15. (a) $C = \frac{5}{3}T - 60$

(b) \$10 higher

(c) 99°