

Problem Set 50 — Even Answers

2. $P(7 \cup H) = \frac{4}{13}$

4. 49, 56, 63, 70

6a. range = 18, median = 32
mean and mode cannot be determined

b. The lower 50% of the data has a range of 10, while the upper 50% of the data has a range of 8. The data has no outliers. While close, the data is not distributed normally.

8. 68.2% of the data is between 35 and 65. 95.4% of the data is between 20 and 80. 2.3% of the data is less than 20 and 2.3% of the data is greater than 80.

10. ≈ 100
 $\frac{2500}{3^3} \text{yd}^3 \approx 92.593 \text{ yd}^3$

12a. $(f - g)(x) = x^3 - 1$

b. $\{x \in \mathcal{R}\}$

c. $(f - g)(-2) = -9$

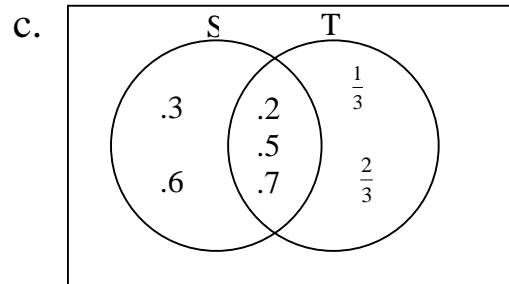
14a. $\frac{x^3 + 2x}{2x + 1}$

b. $\left\{x \in \mathcal{R} \mid x \neq -\frac{1}{2}\right\}$

c. 1

16a. $Q \cap R = \{0.2, 0.5, 0.7\}$

b. $Q \cup R = \left\{.2, .3, \frac{1}{3}, .5, .6, \frac{2}{3}, 0.7\right\}$



18. $x = 4 \pm 2\sqrt{6} \approx -0.899, 8.899$

20. $a = \frac{\sqrt{113}}{2}, b = \frac{21}{4}, c = \frac{\sqrt{113}}{4}$

22. $16x^4 + 32x^3y + 24x^2y^2 + 8xy^3 + y^4$

24. $x = 1, 7$

26. none are functions

28. 1×10^{10}

30. $4y^{-1} - 12p^{-1}$