

Problem Set 63 — Even Answers

2. 1050 ml of 5%
350 ml of 25%

4. 80 lbs

6. This conic is a circle, centered at the origin, with a radius of $\sqrt{50} \approx 7.071$.

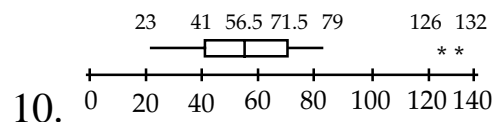
$$Y_1 = \sqrt{50 - x^2}, \quad Y_2 = -Y_1$$

8a.
$$\left(\frac{f}{g}\right)(x) = \frac{x^2 + 5x + 6}{x + 2}$$

$$= x + 3, \quad x \neq -2$$

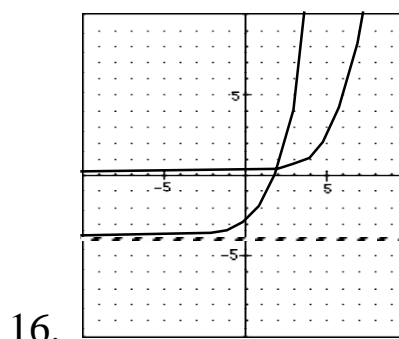
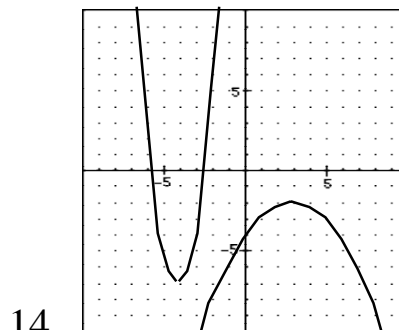
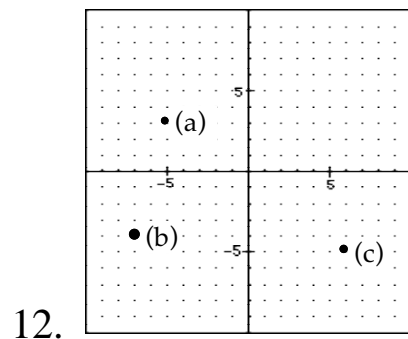
b. $\{x \in \mathcal{R} \mid x \neq -2\}$

- c. The graph is a line, $y = x + 3$, except with a hole at $(-2, 1)$.



$$Q_1 = 41, \quad \text{med} = 56.5$$

$$Q_3 = 71.5, \quad \text{IQR} = 30.5$$



18. $-6 - 7i$

20a. $3^{\frac{5}{3}}$ b. $3^{\frac{11}{6}}$

22. $x - y$

24. $x = -\frac{5}{2}, \frac{2}{3}$

26a. -6.560×10^{26} b. 0.088

28. $h = 6 \text{ cm}$
 $SA = (372 + 5\pi) \text{ cm}^2 \approx 387.708 \text{ cm}^2$

30. $x = \frac{13}{8}$