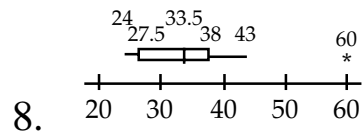


Problem Set 53 — Even Answers

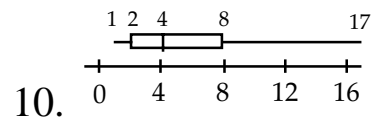
2. $P(D \cup 9) = \frac{4}{13}$

4. $V = \frac{33}{16} \pi \text{ in}^3 \approx 6.480 \text{ in}^3$

6. $x = -\frac{2}{3} \pm \frac{\sqrt{13}}{3} \approx -1.869, 0.535$



range = 36, $\bar{x} = 34.4$
 median = 33.5,
 mode = 27, 32, 37, 38
 $Q_1 = 27.5$, $Q_3 = 38$
 IQR = 10.5, $\sigma = 8.089$



range = 16, median = 4
 $Q_1 = 2$, $Q_3 = 8$, IQR = 6

12. $p = 57$,
 $x = 10 \cos 33^\circ \approx 8.387$
 $y = 10 \sin 33^\circ \approx 5.446$

14. $\approx 2 \times 10^{10}$

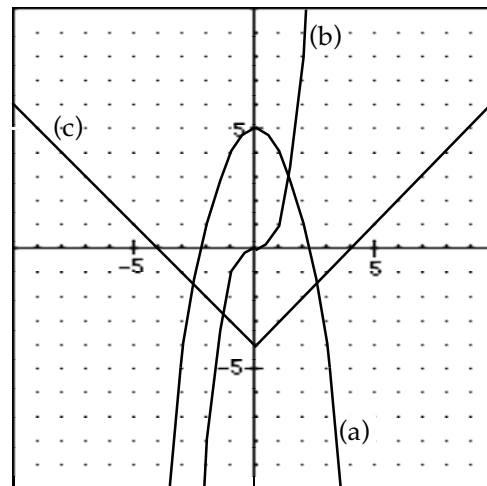
16. 0.108

18. $c = \frac{kmx^2}{4mp - xy}$

20a. $\frac{f}{g}(x) = \frac{x^2 + 3}{\sqrt{x + 4}}$

b. $\{x \in \mathcal{R} \mid x > -4\}$

c. \emptyset



22.

24. $x^3 - 6x^2y + 12xy^2 - 8y^3$

26. $\frac{6x^3 - x^2 - 2x + 2}{x^2(x+1)(x-1)}$

28. $A = 30$, $B = 150$, $C = 15$
 $L = \pi \approx 3.142$

30. $\frac{1}{8}$