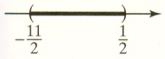
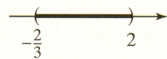


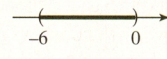
73.  $\left\{x \mid -\frac{11}{2} < x < \frac{1}{2}\right\}; \left(-\frac{11}{2}, \frac{1}{2}\right)$



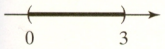
74.  $\left\{x \mid -\frac{2}{3} < x < 2\right\}; \left(-\frac{2}{3}, 2\right)$



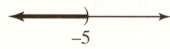
75.  $\{x \mid -6 < x < 0\}; (-6, 0)$



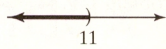
76.  $\{x \mid 0 < x < 3\}; (0, 3)$



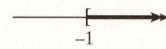
77.  $\{x \mid x < -5\}; (-\infty, -5)$



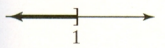
78.  $\{x \mid x < 11\}; (-\infty, 11)$



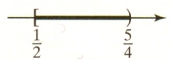
79.  $\{x \mid x \geq -1\}; [-1, \infty)$



80.  $\{x \mid x \leq 1\}; (-\infty, 1]$



81.  $\left\{x \mid \frac{1}{2} \leq x < \frac{5}{4}\right\}; \left[\frac{1}{2}, \frac{5}{4}\right)$



82.  $\left\{x \mid -\frac{1}{3} < x \leq \frac{1}{3}\right\}; \left(-\frac{1}{3}, \frac{1}{3}\right]$



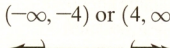
83.  $\{x \mid -6 < x < 6\}; (-6, 6)$



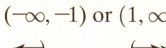
84.  $\{x \mid -9 < x < 9\}; (-9, 9)$



85.  $\{x \mid x < -4 \text{ or } x > 4\}; (-\infty, -4) \text{ or } (4, \infty)$



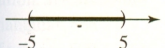
86.  $\{x \mid x < -1 \text{ or } x > 1\}; (-\infty, -1) \text{ or } (1, \infty)$



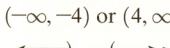
87.  $\{x \mid -4 < x < 4\}; (-4, 4)$



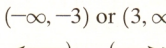
88.  $\{x \mid -5 < x < 5\}; (-5, 5)$



89.  $\{x \mid x < -4 \text{ or } x > 4\}; (-\infty, -4) \text{ or } (4, \infty)$



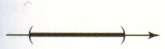
90.  $\{x \mid x < -3 \text{ or } x > 3\}; (-\infty, -3) \text{ or } (3, \infty)$



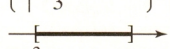
91.  $\{x \mid 1 < x < 3\}; (1, 3)$



92.  $\{x \mid -6 < x < -2\}; (-6, -2)$



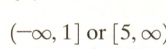
93.  $\left\{t \mid -\frac{2}{3} \leq t \leq 2\right\}; \left[-\frac{2}{3}, 2\right]$



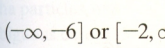
94.  $\{u \mid -6 \leq u \leq 1\}; [-6, 1]$



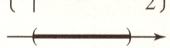
95.  $\{x \mid x \leq 1 \text{ or } x \geq 5\}; (-\infty, 1] \text{ or } [5, \infty)$



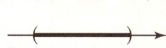
96.  $\{x \mid x \leq -6 \text{ or } x \geq -2\}; (-\infty, -6] \text{ or } [-2, \infty)$



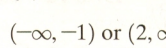
97.  $\left\{x \mid -1 < x < \frac{3}{2}\right\}; \left(-1, \frac{3}{2}\right)$



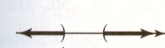
98.  $\{x \mid -1 < x < 2\}; (-1, 2)$



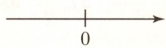
99.  $\{x \mid x < -1 \text{ or } x > 2\}; (-\infty, -1) \text{ or } (2, \infty)$



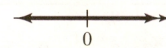
100.  $\left\{x \mid x < \frac{1}{3} \text{ or } x > 1\right\}; \left(-\infty, \frac{1}{3}\right) \text{ or } (1, \infty)$



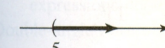
101. No real solution;  $\emptyset$



102. All real numbers;  $(-\infty, \infty)$



103.  $\{x \mid x > 5\}; (5, \infty)$



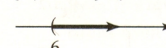
104.  $\{x \mid x > 5\}; (5, \infty)$



105.  $\{x \mid x > 3\}; (3, \infty)$



106.  $\{x \mid x > 6\}; (6, \infty)$



107.  $|x - 2| < \frac{1}{2}; \left\{x \mid \frac{3}{2} < x < \frac{5}{2}\right\}$  108.  $|x + 1| < 1; \{x \mid -2 < x < 0\}$  109.  $|x + 3| > 2; \{x \mid x < -5 \text{ or } x > -1\}$

110.  $|x - 2| > 3; \{x \mid x < -1 \text{ or } x > 5\}$  111.  $21 < \text{age} < 30$  112.  $40 \leq \text{age} < 60$  113.  $|x - 98.6| \geq 1.5; \{x \mid x \leq 97.1 \text{ or } x \geq 100.1\}$

114.  $|x - 115| \leq 5; \{x \mid 110 \leq x \leq 120\}$  115. (a) Male  $\geq 75.6$  (b) Female  $\geq 80.4$  (c) A female can expect to live at least 4.8 years longer.

116. The volume of the gas ranges from 7060 to 7860 cc, inclusive. 117. The agent's commission ranges from \$45,000 to \$95,000, inclusive. As a percent of selling price, the commission ranges from 5% to approximately 8.6%, inclusive. 118. The commission will vary from \$53 to \$145, inclusive. 119. The amount withheld varies from \$76.35 to \$101.35, inclusive. 120. The amount withheld varies from \$126.35 to \$151.35, inclusive. 121. The usage varies from approximately 675.41 to 2500.91 kilowatt-hours, inclusive. 122. The water usage varied from 13,500 gal to approximately 20,500 gal. 123. The dealer's cost varies from \$7457.63 to \$7857.14, inclusive. 124. The people in the top 2.5% have test scores in the interval (123.52,  $\infty$ ). 125. You need at least a 74 on the last test. 126. You need at least a 77 on the last test. 127. The amount of gasoline ranged from 12 to 20 gal, inclusive. 128. There were 10 gal or less (and at least 0 gal) of gasoline at the start of the trip.

129.  $\frac{a+b}{2} - a = \frac{a+b-2a}{2} = \frac{b-a}{2} > 0$ ; therefore,  $a < \frac{a+b}{2}$ .  
 $b - \frac{a+b}{2} = \frac{2b-a-b}{2} = \frac{b-a}{2} > 0$ ; therefore,  $b > \frac{a+b}{2}$ .

130.  $\frac{a+b}{2} - a = \frac{a+b-2a}{2} = \frac{b-a}{2}$   
 $b - \frac{a+b}{2} = \frac{2b-a-b}{2} = \frac{b-a}{2}$ ;

thus,  $\frac{a+b}{2}$  is equidistant from  $a$  and  $b$ .