Exercise 75

Distance Find the distance between the given numbers.

$$\textbf{(a)} \ 2 \text{ and } 17 \qquad \textbf{(b)} \ -3 \text{ and } 21 \qquad \textbf{(c)} \ \frac{11}{8} \text{ and } -\frac{3}{10}$$

Solution

The distance between the numbers is the absolute value of their difference.

$$\textbf{(a)} \ |2 - 17| = |-15| = 15$$

$$\textbf{(b)} \ |-3 - 21| = |-24| = 24$$

$$\textbf{(c)} \ \left| \frac{11}{8} - \left(-\frac{3}{10} \right) \right| = \left| \frac{110}{80} + \frac{24}{80} \right| = \left| \frac{134}{80} \right| = \frac{134}{80} = \frac{67}{40}$$