

1. Carry out the operation indicated.

(a)  $31.26 + 4.725 - 2.1$

$$\begin{array}{r} 31.26 \\ + \quad 4.725 \\ \hline 35.985 \\ - \quad 2.1 \\ \hline \mathbf{33.885} \end{array}$$

(b)  $2.43 \times 5.1$

$$\begin{array}{r} 2.43 \\ \times \quad 5.1 \\ \hline 243 \\ + 12150 \\ \hline \mathbf{12.393} \end{array}$$

(c)  $56.12 \div 0.06$

$$\begin{array}{r} \mathbf{935.\bar{3}} \\ 06 \overline{)5612.0} \\ \underline{54} \phantom{0} \\ 21 \phantom{0} \\ \underline{18} \phantom{0} \\ 32 \phantom{0} \\ \underline{30} \phantom{0} \\ 20 \phantom{0} \\ \underline{18} \phantom{0} \\ 2 \phantom{0} \end{array}$$

(d)  $0.3 + \frac{1}{5}$

$$0.3 + \frac{1}{5} = 0.3 + 0.2 = \mathbf{0.5}$$

2. Convert each of the following decimals to fractions in reduced form.

(a) 0.52

$$0.52 = \frac{52}{100} = \frac{\mathbf{13}}{\mathbf{25}}$$

(b)  $0.\bar{6}$

$$0.\bar{6} = \frac{6}{9} = \frac{\mathbf{2}}{\mathbf{3}}$$

(c) 21.3

$$21.3 = 21\frac{3}{10} = \frac{213}{10}$$

(d)  $4.5\bar{3}$

$$10n = 45.3333\dots$$

$$\underline{n = 4.5333\dots}$$

$$9n = 40.8$$

$$n = \frac{40.8}{9} = \frac{408}{90} = \frac{68}{15}$$

3. For each pair of numbers, find a number that lies between them. (Note: there are many possible answers to each problem.)

(a)  $\frac{2}{5}, 1$

$$\begin{aligned} \text{Since } 1 &= \frac{5}{5}, \\ \frac{2}{5} &< \frac{4}{5} < 1 \end{aligned}$$

(b)  $\frac{1}{3}, \frac{1}{4}$

$$\begin{aligned} \text{Since, } \frac{1}{3} &= \frac{8}{24}, \text{ and } \frac{1}{4} = \frac{6}{24}, \\ \frac{1}{4} &< \frac{7}{24} < \frac{1}{3} \end{aligned}$$

(c) 0.356, 0.357

$$\begin{aligned} \text{Since, } 0.356 &= 0.3560, \text{ and } 0.357 = 0.3570, \\ 0.356 &< \mathbf{0.3565} < 0.357 \end{aligned}$$

(d) 0.2,  $0.\bar{2}$

$$\begin{aligned} \text{Since, } 0.2 &= 0.20000, \text{ and } 0.\bar{2} = 0.2222\dots, \\ 0.2 &< \mathbf{0.21} < 0.\bar{2} \end{aligned}$$