



SpeedLabs

MATHS

CBSE 7th

TEEVRA EDUTECH PVT. LTD.

Fractions and Decimals

Exercise-2.4

Q.1 Find:

(i) $12 \div \frac{3}{4}$ (ii) $14 \div \frac{5}{6}$ (iii) $8 \div \frac{7}{3}$

(iv) $4 \div \frac{8}{3}$ (v) $3 \div 2\frac{1}{3}$ (vi) $5 \div 3\frac{4}{7}$

Sol: (i) $12 \div \frac{3}{4} = 12 \times \frac{4}{3} = 16$ (ii) $14 \div \frac{5}{6} = 14 \times \frac{6}{5} = \frac{84}{5} = 16\frac{4}{5}$

(iii) $8 \div \frac{7}{3} = 8 \times \frac{3}{7} = \frac{24}{7} = 3\frac{3}{7}$ (iv) $4 \div \frac{8}{3} = 4 \times \frac{3}{8} = \frac{3}{2} = 1\frac{1}{2}$

(v) $3 \div 2\frac{1}{3} = 3 \times \frac{3}{7} = \frac{9}{7} = 1\frac{2}{7}$ (vi) $5 \div 3\frac{4}{7} = 5 \times \frac{7}{25} = \frac{7}{5} = 1\frac{2}{5}$

Q.2 Find the reciprocal of each of the following fractions. Classify the reciprocals as proper fraction, improper fractions and whole numbers.

(i) $\frac{3}{7}$ (ii) $\frac{5}{8}$ (iii) $\frac{9}{7}$ (iv) $\frac{6}{5}$

(v) $\frac{12}{7}$ (vi) $\frac{1}{8}$ (vii) $\frac{1}{11}$

Sol: (i) Reciprocal of $\frac{3}{7} = \frac{7}{3} \rightarrow$ Improper fraction

(ii) Reciprocal of $\frac{5}{8} = \frac{8}{5} \rightarrow$ Improper fraction

(iii) Reciprocal of $\frac{9}{7} = \frac{7}{9} \rightarrow$ Proper fraction

(iv) Reciprocal of $\frac{6}{5} = \frac{5}{6} \rightarrow$ Proper fraction

(v) Reciprocal of $\frac{12}{7} = \frac{7}{12} \rightarrow$ Proper fraction

(vi) Reciprocal of $\frac{1}{8} = 8 \rightarrow$ Whole number

(vii) Reciprocal of $\frac{1}{11} = 11 \rightarrow$ Whole number

Q.3 Find:

(i) $\frac{7}{3} \div 2$ (ii) $\frac{4}{9} \div 5$ (iii) $\frac{6}{13} \div 7$ (iv) $4\frac{1}{3} \div 3$ (v) $3\frac{1}{2} \div 4$ (vi) $4\frac{3}{7} \div 7$

Sol: (i) $\frac{7}{3} \div 2 = \frac{7}{3} \times \frac{1}{2} = \frac{7}{6}$ (ii) $\frac{4}{9} \div 5 = \frac{4}{9} \times \frac{1}{5} = \frac{4}{45}$

(iii) $\frac{6}{13} \div 7 = \frac{6}{13} \times \frac{1}{7} = \frac{6}{91}$ (iv) $4\frac{1}{3} \div 3 = \frac{13}{3} \times \frac{1}{3} = \frac{13}{9}$

(v) $3\frac{1}{2} \div 4 = \frac{7}{2} \times \frac{1}{4} = \frac{7}{8}$ (vi) $4\frac{3}{7} \div 7 = \frac{31}{7} \times \frac{1}{7} = \frac{31}{49}$

Q.4 Find:

(i) $\frac{2}{5} \div \frac{1}{2}$

(ii) $\frac{4}{9} \div \frac{2}{3}$

(iii) $\frac{3}{7} \div \frac{8}{7}$

(iv) $2\frac{1}{3} \div \frac{3}{5}$

(v) $3\frac{1}{2} \div \frac{8}{3}$

(vi) $\frac{2}{5} \div 1\frac{1}{2}$

(vii) $3\frac{1}{5} \div 1\frac{2}{3}$

(viii) $2\frac{1}{5} \div 1\frac{1}{5}$

Sol: (i) $\frac{2}{5} \div \frac{1}{2} = \frac{2}{5} \times 2 = \frac{4}{5}$

(ii) $\frac{4}{9} \div \frac{2}{3} = \frac{4}{9} \times \frac{3}{2} = \frac{2}{3}$

(iii) $\frac{3}{7} \div \frac{8}{7} = \frac{3}{7} \times \frac{7}{8} = \frac{3}{8}$

(iv) $2\frac{1}{3} \div \frac{3}{5} = \frac{7}{3} \times \frac{5}{3}$

(v) $3\frac{1}{2} \div \frac{8}{3} = \frac{7}{2} \times \frac{3}{8} = \frac{21}{16}$

(vi) $\frac{2}{5} \div 1\frac{1}{2} = \frac{2}{5} \times \frac{2}{3} = \frac{4}{15}$

(vii) $3\frac{1}{5} \div 1\frac{2}{3} = \frac{16}{5} \times \frac{3}{5} = \frac{48}{25}$

(viii) $2\frac{1}{5} \div 1\frac{1}{5} = \frac{11}{5} \times \frac{5}{6} = \frac{11}{6}$

Q.5 Solve the following questions, $6x = 12$

Sol: $6x = 12$

$\Rightarrow \frac{x}{6} = \frac{12}{6}$ [Dividing both sides by 6]

$\Rightarrow x = 2$

Q.6 Solve the following questions, $\frac{t}{5} = 10$

Sol: $\Rightarrow \frac{t}{5} = 10$

$\Rightarrow \frac{t}{5} \times 5 = 10 \times 5$ [Multiplying both sides by 5]

$\Rightarrow t = 50$

Q.7 Solve the following questions, $\frac{2x}{3} = 18$

Sol: $\frac{2x}{3} = 18$

$\Rightarrow \frac{2x}{3} \times 3 = 18 \times 3$ [Multiplying both sides by 3]

$\Rightarrow 2x = 18 \times 3$

$\Rightarrow \frac{2x}{2} = \frac{18 \times 3}{2}$ [Dividing both sides by 2]

$\Rightarrow x = 27$

Q.8 Solve the following questions. $1.6 = \frac{y}{1.5}$

Sol: $1.6 = \frac{y}{1.5}$

$\Rightarrow 1.6 \times 1.5 = \frac{y}{1.5} \times 1.5$ [Multiplying both sides by 1.5]

$\Rightarrow 2.40 = y$

$\Rightarrow y = 2.40$

Q.9 Solve the following questions, $7x - 9 = 16$

Sol: $7x - 9 = 16$
 $\Rightarrow 7x - 9 + 9 = 16 + 9$ [Adding 9 both sides]
 $\Rightarrow 7x = 25$
 $\Rightarrow \frac{7x}{7} = \frac{25}{7}$ [Dividing both sides by 7]
 $\Rightarrow x = \frac{25}{7}$

Q.10 Solve the following questions, $14y - 8 = 13$

Sol: $14y - 8 = 13$
 $\Rightarrow 14y - 8 + 8 = 13 + 8$ [Adding 8 both sides]
 $\Rightarrow 14y = 21$
 $\Rightarrow \frac{14y}{14} = \frac{21}{14}$ [Dividing both sides by 14]
 $\Rightarrow y = \frac{3}{2}$

Q.11 Solve the following questions. $17 + 6p = 9$

Sol: $17 + 6p = 9$
 $\Rightarrow 17 + 6p - 17 = 9 - 17$ [Subtracting 17 from both sides]
 $\Rightarrow 6p = -8$
 $\Rightarrow \frac{6p}{6} = \frac{-8}{6}$ [Dividing both sides by 6]
 $\Rightarrow p = \frac{-4}{3}$

Q.12 Solve the following questions, $\frac{x}{3} + 1 = \frac{7}{15}$

Sol: $\frac{x}{3} + 1 = \frac{7}{15}$
 $\Rightarrow \frac{x}{3} + 1 - 1 = \frac{7}{15} - 1$ [Subtracting 1 from both sides]
 $\Rightarrow \frac{x}{3} = \frac{7-15}{15}$
 $\Rightarrow \frac{x}{3} = \frac{-8}{15}$
 $\Rightarrow \frac{x}{3} \times 3 = \frac{-8}{15} \times 3$ [Multiplying both sides by 3]
 $\Rightarrow x = \frac{-8}{5}$