



MATHEMATICS

EXERCISE 2.4

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) $5 \div 3\frac{4}{7}$

2. Find the reciprocal of each of the following fractions. Classify the reciprocals as proper fractions, 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) $\frac{1}{11}$

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) $4\frac{3}{7} \div 7$

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

2.4 HOW WELL HAVE YOU LEARNT ABOUT DECIMAL NUMBERS

Thus, to divide a whole number by any fraction, multiply that whole number by the reciprocal of that fraction.

TRY THESE

Find: (i) $7 \div \frac{2}{5}$ (ii) $6 \div \frac{4}{7}$ (iii) $2 \div \frac{8}{9}$



- While dividing a whole number by a mixed fraction, first convert the mixed fraction into improper fraction and then solve it.

Thus, $4 \div 2\frac{2}{5} = 4 \div \frac{12}{5} = ?$ Also, $5 \div 3\frac{1}{3} = 3 \div \frac{10}{3} = ?$

TRY THESE

Find: (i) $6 \div 5\frac{1}{3}$
(ii) $7 \div 2\frac{4}{7}$

2.4.2 Division of a Fraction by a Whole Number

- What will be $\frac{3}{4} \div 3$?

Based on our earlier observations we have: $\frac{3}{4} \div 3 = \frac{3}{4} \div \frac{3}{1} = \frac{3}{4} \times \frac{1}{3} = \frac{3}{12} = \frac{1}{4}$

So, $\frac{2}{3} \div 7 = \frac{2}{3} \times \frac{1}{7} = ?$ What is $\frac{5}{7} \div 6$, $\frac{2}{7} \div 8$?

- While dividing mixed fractions by whole numbers, convert the mixed fractions into improper fractions. That is,

$2\frac{2}{3} \div 5 = \frac{8}{3} \div 5 = \dots\dots\dots$; $4\frac{2}{5} \div 3 = \dots\dots\dots = \dots\dots\dots$; $2\frac{3}{5} \div 2 = \dots\dots\dots = \dots\dots\dots$

2.4.3 Division of a Fraction by Another Fraction

We can now find $\frac{1}{3} \div \frac{5}{6}$.

$\frac{1}{3} \div \frac{5}{6} = \frac{1}{3} \times$ reciprocal of $\frac{5}{6} = \frac{1}{3} \times \frac{6}{5} = \frac{2}{5}$.

Similarly, $\frac{8}{5} \div \frac{2}{3} = \frac{8}{5} \times$ reciprocal of $\frac{2}{3} = ?$ and, $\frac{1}{2} \div \frac{3}{4} = ?$

TRY THESE

Find: (i) $\frac{3}{5} \div \frac{1}{2}$ (ii) $\frac{1}{2} \div \frac{3}{5}$ (iii) $2\frac{1}{2} \div \frac{3}{5}$ (iv) $5\frac{1}{6} \div \frac{9}{2}$

