Mathematics

(Chapter – 2) (Fractions and Decimals) (Exercise 2.1)
(Class – VII)

Question 1:

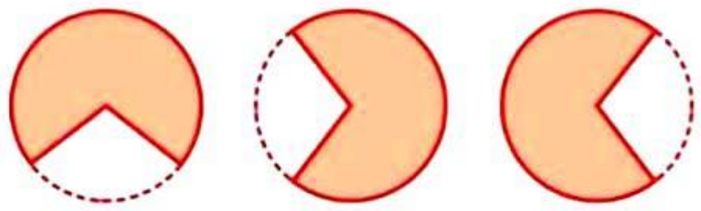
Which of the drawings (a) to (d) show:

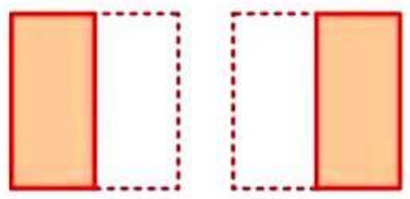
(i) $2\times\frac{1}{5}$

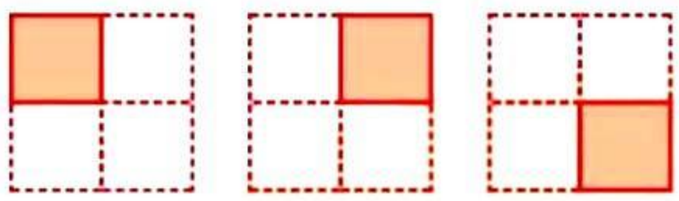
(ii) $2\times\frac{1}{2}$

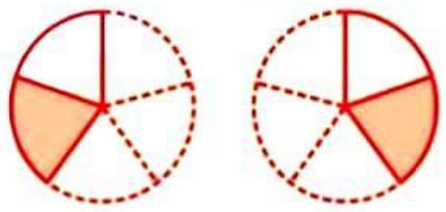
(iii) $3\times\frac{2}{3}$

(iv) $3\times\frac{1}{4}$

(a) 

(b) 

(c) 

(d) 

Answer 1:

(i) – (d) Since $2\times\frac{1}{5}=\frac{1}{5}+\frac{1}{5}$

(ii) – (b) Since $2\times\frac{1}{2}=\frac{1}{2}+\frac{1}{2}$

(iii) – (a) Since $3\times\frac{2}{3}=\frac{2}{3}+\frac{2}{3}+\frac{2}{3}$

(iv) – (c) Since $3\times\frac{1}{4}=\frac{1}{4}+\frac{1}{4}+\frac{1}{4}$

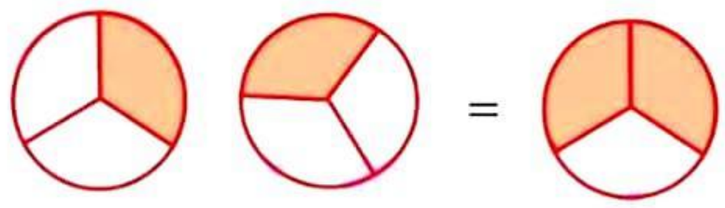
Question 2:

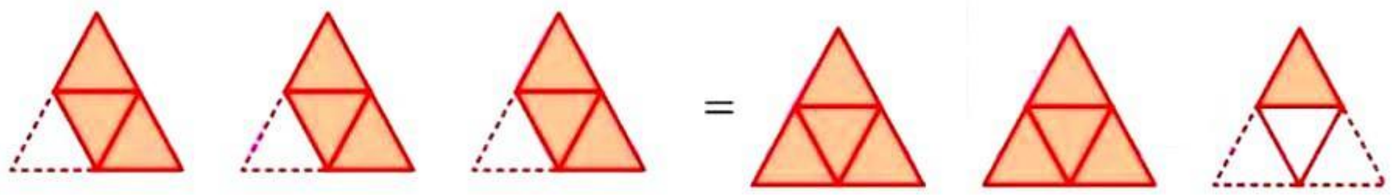
Some pictures (a) to (c) are given below. Tell which of them show:

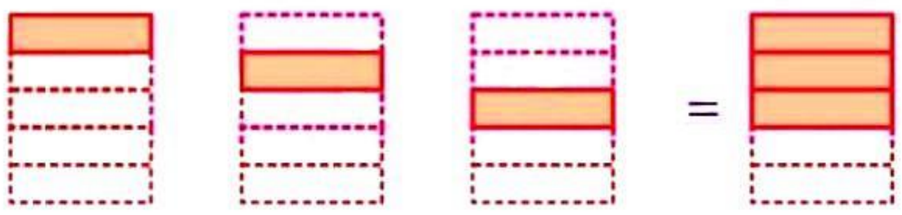
(i) $3\times\frac{1}{5}=\frac{3}{5}$

(ii) $2\times\frac{1}{3}=\frac{2}{3}$

(iii) $3\times\frac{3}{4}=2\frac{1}{4}$

(a) 

(b) 

(c) 

Answer 2:

(i) – (c) Since $3\times\frac{1}{5}=\frac{1}{5}+\frac{1}{5}+\frac{1}{5}$

(ii) – (a) Since $2\times\frac{1}{3}=\frac{1}{3}+\frac{1}{3}$

(iii) – (b) Since $3\times\frac{3}{4}=\frac{3}{4}+\frac{3}{4}+\frac{3}{4}$

Question 3:

Multiply and reduce to lowest form and convert into a mixed fraction:

(i) $7 \times \frac{3}{5}$

(ii) $4 \times \frac{1}{3}$

(iii) $2 \times \frac{6}{7}$

(iv) $5 \times \frac{2}{9}$

(v) $\frac{2}{3} \times 4$

(vi) $\frac{5}{2} \times 6$

(vii) $11 \times \frac{4}{7}$

(viii) $20 \times \frac{4}{5}$

(ix) $13 \times \frac{1}{3}$

(x) $15 \times \frac{3}{5}$

Answer 3:

(i) $7 \times \frac{3}{5} = \frac{7 \times 3}{5} = \frac{21}{5} = 4\frac{1}{5}$

(ii) $4 \times \frac{1}{3} = \frac{4 \times 1}{3} = \frac{4}{3} = 1\frac{1}{3}$

(iii) $2 \times \frac{6}{7} = \frac{2 \times 6}{7} = \frac{12}{7} = 1\frac{5}{7}$

(iv) $5 \times \frac{2}{9} = \frac{5 \times 2}{9} = \frac{10}{9} = 1\frac{1}{9}$

(v) $\frac{2}{3} \times 4 = \frac{2 \times 4}{3} = \frac{8}{3} = 2\frac{2}{3}$

(vi) $\frac{5}{2} \times 6 = 5 \times 3 = 15$

(vii) $11 \times \frac{4}{7} = \frac{11 \times 4}{7} = \frac{44}{7} = 6\frac{2}{7}$

(viii) $20 \times \frac{4}{5} = 4 \text{ x } 4 = 16$

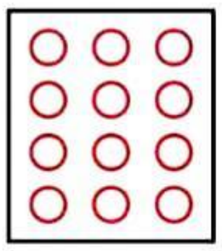
(ix) $13 \times \frac{1}{3} = \frac{13 \times 1}{3} = \frac{13}{3} = 4\frac{1}{3}$

(x) $15 \times \frac{3}{5} = 3 \text{ x } 3 = 9$

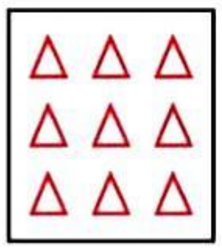
Question 4:

Shade:

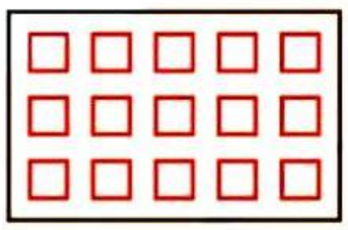
(i) $\frac{1}{2}$ of the circles in box (a)



(ii) $\frac{2}{3}$ of the triangles in box (b)

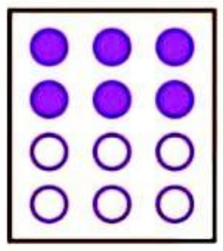


(iii) $\frac{3}{5}$ of the squares inbox (c)

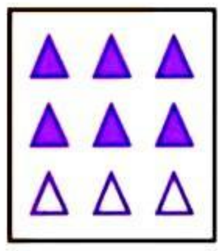


Answer 4:

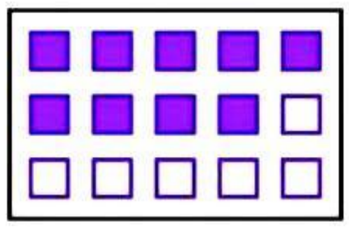
(i) $\frac{1}{2}$ of 12 circles $= \frac{1}{2} \times 12 = 6$ circles



(ii) $\frac{2}{3}$ of 9 triangles $= \frac{2}{3} \times 9 = 2 \times 3 = 6$ triangles



(iii) $\frac{3}{5}$ of 15 squares $= \frac{3}{5} \times 15$ $3 \times 3 = 9$ squares



Question 5:

Find:

(a) $\frac{1}{2}$ of (i) 24 (ii) 46

(b) $\frac{2}{3}$ of (i) 18 (ii) 27

(c) $\frac{3}{4}$ of (i) 16 (ii) 36

(d) $\frac{4}{5}$ of (i) 20 (ii) 35

Answer 5:

(a)(i) $\frac{1}{2}$ of $24 = 12$ (ii) $\frac{1}{2}$ of $46 = = 23$

(b)(i) $\frac{2}{3}$ of $18 = \frac{2}{3} \times 18 = 2 \times 6 = 12$ (ii) $\frac{2}{3}$ of $27 = \frac{2}{3} \times 27 = 2 \times 9 = 18$

(c) (i) $\frac{3}{4}$ of $16 = \frac{3}{4} \times 16 = 3 \times 4 = 12$ (ii) $\frac{3}{4}$ of $36 = \frac{3}{4} \times 36 = 3 \times 9 = 27$

(d) (i) $\frac{4}{5}$ of $20 = \frac{4}{5} \times 20 = 4 \times 4 = 16$ (ii) $\frac{4}{5}$ of $35 = \frac{4}{5} \times 35 = 4 \times 7 = 28$

Question 6:

Multiply and express as a mixed fraction:

(a) $3\times5\frac{1}{5}$

(b) $5\times6\frac{3}{4}$

(c) $7\times2\frac{1}{4}$

(d) $4\times6\frac{1}{3}$

(e) $3\frac{1}{4}\times6$

(f) $3\frac{2}{5}\times8$

Answer 6:

(a) $3\times5\frac{1}{5}=3\times\frac{26}{5}=\frac{3\times26}{5}=\frac{78}{5}=15\frac{3}{5}$

(b) $5\times6\frac{3}{4}=5\times\frac{27}{4}=\frac{5\times27}{4}=\frac{135}{4}=33\frac{3}{4}$

(c) $7\times2\frac{1}{4}=7\times\frac{9}{4}=\frac{7\times9}{4}=\frac{63}{4}=15\frac{3}{4}$

(d) $4\times6\frac{1}{3}=4\times\frac{19}{3}=\frac{4\times19}{3}=\frac{76}{3}=25\frac{1}{3}$

(e) $3\frac{1}{4}\times6=\frac{13}{4}\times6=\frac{13\times3}{2}=\frac{39}{2}=19\frac{1}{2}$

(f) $3\frac{2}{5}\times8=\frac{17}{5}\times8=\frac{17\times8}{5}=\frac{136}{5}=27\frac{1}{5}$

Question 7:

Find:

(a) $\frac{1}{2}$ of **(i)** $2\frac{3}{4}$ **(ii)** $4\frac{2}{9}$

(b) $\frac{5}{8}$ of **(i)** $3\frac{5}{6}$ **(ii)** $9\frac{2}{3}$

Answer 7:

(a) **(i)** $\frac{1}{2}$ of $2\frac{3}{4}=\frac{1}{2}\times2\frac{3}{4}=\frac{1}{2}\times\frac{11}{4}=\frac{11}{8}=1\frac{3}{8}$

(ii) $\frac{1}{2}$ of $4\frac{2}{9}=\frac{1}{2}\times4\frac{2}{9}=\frac{1}{2}\times\frac{38}{9}=\frac{19}{9}=2\frac{1}{9}$

(b) **(i)** $\frac{5}{8}$ of $3\frac{5}{6}=\frac{5}{8}\times3\frac{5}{6}=\frac{5}{8}\times\frac{23}{6}=\frac{115}{48}=2\frac{19}{48}$

(ii) $\frac{5}{8}$ of $9\frac{2}{3}=\frac{5}{8}\times9\frac{2}{3}=\frac{5}{8}\times\frac{29}{3}=\frac{145}{24}=6\frac{1}{24}$

Question 8:

Vidya and Pratap went for a picnic. Their mother gave them a water bottle that contained 5 litres of water. Vidya consumed $\frac{2}{5}$ of the water. Pratap consumed the remaining water.

(i) How much water did Vidya drink?

(ii) What fraction of the total quantity of water did Pratap drink?

Answer 8:

Given: Total quantity of water in bottle = 5 litres

(i) Vidya consumed$= \frac{5}{2}$ = of 5 litres $= \frac{2}{5} \times 5 = 2$ litres

Thus, Vidya drank 2 litres water from the bottle.

(ii) Pratap consumed $= \left(-\frac{2}{5}\right)$ part of bottle $= 5 - \frac{2}{5} = \frac{3}{5}$ part of bottle

Pratap consumed $\frac{3}{5}$ of 5 litres water $= \frac{3}{5} \times 5 = 3$ litres

Thus, Pratap drank $\frac{3}{5}$ part of the total quantity of water.

Mathematics

(Chapter – 2) (Fractions and Decimals) (Exercise 2.2)
(Class – VII)

Question 1:

Find:

(i) $\frac{1}{4}$ of (a) $\frac{1}{4}$ (b) $\frac{3}{5}$ (c) $\frac{4}{3}$

(ii) $\frac{1}{7}$ of (a) $\frac{2}{9}$ (b) $\frac{6}{5}$ (c) $\frac{3}{10}$

Answer 1:

(i) (a) $\frac{1}{4}$ of $\frac{1}{4} = \frac{1}{4}\times\frac{1}{4} = \frac{1\times1}{4\times4} = \frac{1}{16}$

(b) $\frac{1}{4}$ of $\frac{3}{5} = \frac{1}{4}\times\frac{3}{4} = \frac{1\times3}{4\times4} = \frac{3}{16}$

(c) $\frac{1}{4}$ of $\frac{4}{3} = \frac{1}{4}\times\frac{4}{3} = \frac{1\times4}{4\times3} = \frac{1}{3}$

(ii) (a) $\frac{1}{7}$ of $\frac{2}{9} = \frac{1}{7}\times\frac{2}{9} = \frac{1\times2}{7\times9} = \frac{2}{63}$

(b) $\frac{1}{7}$ of $\frac{2}{9} = \frac{1}{7}\times\frac{6}{5} = \frac{1\times6}{7\times5} = \frac{6}{35}$

(c) $\frac{1}{7}$ of $\frac{2}{9} = \frac{1}{7}\times\frac{3}{10} = \frac{1\times3}{7\times10} = \frac{3}{70}$

Question 2:

Multiply and reduce to lowest form (if possible):

(i) $\frac{2}{3}\times2\frac{2}{3}$

(ii) $\frac{2}{7}\times\frac{7}{9}$

(iii) $\frac{3}{8}\times\frac{6}{4}$

(iv) $\frac{9}{5}\times\frac{3}{5}$

(v) $\frac{1}{3}\times\frac{15}{8}$

(vi) $\frac{11}{2}\times\frac{3}{10}$

(vii) $\frac{4}{5}\times\frac{12}{7}$

Answer 2:

(i) $\frac{2}{3}\times2\frac{2}{3} = \frac{2}{3}\times\frac{8}{3} = \frac{2\times8}{3\times3} = \frac{16}{9} = 1\frac{7}{9}$

(ii) $\frac{2}{7}\times\frac{7}{9} = \frac{2\times7}{7\times9} = \frac{2}{9}$

(iii) $\frac{3}{8}\times\frac{6}{4} = \frac{3\times6}{8\times4} = \frac{3\times3}{8\times2} = \frac{9}{16}$

(iv) $\frac{9}{5}\times\frac{3}{5} = \frac{9\times3}{5\times5} = \frac{27}{25} = 1\frac{2}{25}$

(v) $\frac{1}{3}\times\frac{15}{8}=\frac{1\times15}{3\times8}=\frac{1\times5}{1\times8}=\frac{5}{8}$

(vi) $\frac{11}{2}\times\frac{3}{10}=\frac{11\times3}{2\times10}=\frac{33}{20}=1\frac{3}{20}$

(vii) $\frac{4}{5}\times\frac{12}{7}=\frac{4\times12}{5\times7}=\frac{48}{35}=1\frac{13}{35}$

Question 3:

Multiply the following fractions:

(i) $\frac{2}{5}\times5\frac{1}{4}$

(ii) $6\frac{2}{5}\times\frac{7}{9}$

(iii) $\frac{3}{2}\times5\frac{1}{3}$

(iv) $\frac{5}{6}\times2\frac{3}{7}$

(v) $3\frac{2}{5}\times\frac{4}{7}$

(vi) $2\frac{3}{5}\times3$

(vii) $3\frac{4}{7}\times\frac{3}{5}$

Answer3:

(i) $\frac{2}{5}\times5\frac{1}{4}=\frac{2}{5}\times\frac{21}{4}=\frac{2\times21}{5\times4}=\frac{1\times21}{5\times2}=\frac{21}{10}=2\frac{1}{10}$

(ii) $6\frac{2}{5}\times\frac{7}{9}=\frac{32}{5}\times\frac{7}{9}=\frac{32\times7}{5\times9}=\frac{224}{45}=4\frac{44}{45}$

(iii) $\frac{3}{2}\times5\frac{1}{3}=\frac{3}{2}\times\frac{16}{3}=\frac{48}{6}=8$

(iv) $\frac{5}{6}\times2\frac{3}{7}=\frac{5}{6}\times\frac{17}{7}=\frac{85}{42}=2\frac{1}{42}$

(v) $3\frac{2}{5}\times\frac{4}{7}=\frac{17}{7}\times\frac{4}{7}=\frac{68}{35}=1\frac{33}{35}$

(vi) $2\frac{3}{5}\times3=\frac{13}{5}\times\frac{3}{1}=\frac{13\times3}{5\times1}=\frac{39}{5}=7\frac{4}{5}$

(vii) $3\frac{4}{7}\times\frac{3}{5}=\frac{25}{7}\times\frac{3}{5}=\frac{5\times3}{7\times1}=\frac{15}{7}=2\frac{1}{7}$

Question 4:

Which is greater:

(i) $\frac{2}{7}$ of $\frac{3}{4}$ or $\frac{3}{5}$ of $\frac{5}{8}$

(ii) $\frac{1}{2}$ of $\frac{6}{7}$ or $\frac{2}{3}$ of $\frac{3}{7}$

Answer 4:

(i) $\frac{2}{7}$ of $\frac{3}{4}$ or $\frac{3}{5}$ of $\frac{5}{8}$

$\Rightarrow \frac{2}{7} \times \frac{3}{4}$ or $\frac{3}{5} \times \frac{5}{8} \Rightarrow \frac{3}{14}$ or $\frac{3}{8} \Rightarrow \frac{3}{14} < \frac{3}{8}$

Thus, $\frac{3}{5}$ of $\frac{5}{8}$ is greater.

(ii) $\frac{1}{2}$ of $\frac{6}{7}$ or $\frac{2}{3}$ of $\frac{3}{7}$

$\Rightarrow \frac{1}{2} \times \frac{6}{7}$ or $\frac{2}{3} \times \frac{3}{7} \Rightarrow \frac{3}{7}$ or $\frac{2}{7} \Rightarrow \frac{3}{7} > \frac{2}{7}$

Thus, $\frac{1}{2}$ of $\frac{6}{7}$ is greater.

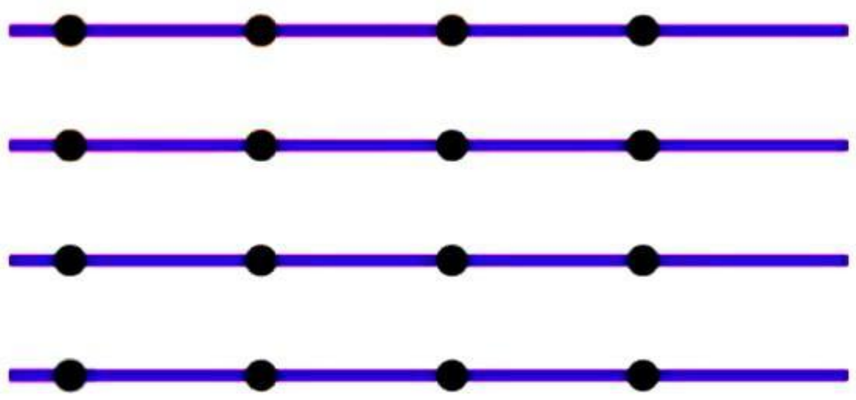
Question 5:

Saili plants 4 saplings in a row in her garden. The distance between two adjacent saplings is $\frac{3}{4}$ m. Find the distance between the first and the last sapling.

Answer 5:

The distance between two adjacent saplings = $\frac{3}{4}$ m

Saili planted 4 saplings in a row, then number of gap in saplings = 3



Therefore,

The distance between the first and the last saplings = $3 \times \frac{3}{4} = \frac{9}{4}$ m = $2\frac{1}{4}$ m

Thus the distance between the first and the last saplings is $2\frac{1}{4}$ m.

Question 6:

Lipika reads a book for $1\frac{3}{4}$ hours everyday. She reads the entire book in 6 days. How many hours in all were required by her to read the book?

Answer 6:

Time taken by Lipika to read a book = $1\frac{3}{4}$ hours.

She reads entire book in 6 days.

Now, total hours taken by her to read the entire book = $1\frac{3}{4} \times 6 = \frac{7}{4} \times 6 = \frac{21}{2} = 10\frac{1}{2}$ hours

Thus, 10 hours were required by her to read the book.

Question 7:

A car runs 16 km using 1 litre of petrol. How much distance will it cover using $2\frac{3}{4}$ litres of petrol?

Answer 7:

In 1 litre of petrol, car covers the distance = 16 km

In $2\frac{3}{4}$ litres of petrol, car covers the distance = $2\frac{3}{4}$ of 16 km

$$= \frac{11}{4} \times 16 = 44 \text{ km}$$

Thus, the car will cover 44 km distance.

Question 8:

(a) (i) Provide the number in the box $\square$, such that $\frac{2}{3} \times \square = \frac{10}{30}$.

(ii) The simplest form of the number obtained in $\square$ is _____.

(b) (i) Provide the number in the box $\square$, such that $\frac{3}{5} \times \square = \frac{24}{75}$.

(ii) The simplest form of the number obtained in $\square$ is _____.

Answer 8:

(a) (i) $\frac{2}{3} \times \boxed{\frac{5}{10}} = \frac{10}{30}$

(ii) The simplest form of $\frac{5}{10}$ is $\frac{1}{2}$.

(b) (i) $\frac{3}{5} \times \boxed{\frac{8}{15}} = \frac{24}{75}$

(ii) The simplest form of $\frac{8}{15}$ is $\frac{8}{15}$.

Mathematics

(Chapter – 2) (Fractions and Decimals) (Exercise 2.3)
(Class – VII)

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

Answer 1:

(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) $3 \div 2\frac{1}{3} = 3 \div \frac{7}{3} = 3 \times \frac{3}{7} = \frac{9}{7} = 1\frac{2}{7}$

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

Question 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) $\frac{1}{11}$

Answer 2:

(i) Reciprocal of $\frac{3}{7} = \frac{7}{3}$ $\longrightarrow$ Improper fraction

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

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

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

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

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

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

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

Answer 3:

(i) $\frac{7}{3} \div 2 = \frac{7}{3} \times \frac{1}{2} = \frac{7 \times 1}{3 \times 2} = \frac{7}{6} = 1\frac{1}{6}$

(ii) $\frac{4}{9} \div 5 = \frac{4}{9} \times \frac{1}{5} = \frac{4 \times 1}{9 \times 5} = \frac{4}{45}$

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

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

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

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

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

Answer 4:

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

(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) $2\frac{1}{3} \div \frac{3}{5} = \frac{7}{3} \div \frac{3}{5} = \frac{7}{3} \times \frac{5}{3} = \frac{35}{9} = 3\frac{8}{9}$

(v) $3\frac{1}{2} \div \frac{8}{3} = \frac{7}{2} \div \frac{8}{3} = \frac{7}{2} \times \frac{3}{8} = \frac{7 \times 3}{2 \times 8} = \frac{21}{16} = 1\frac{5}{16}$

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

(vii) $3\frac{1}{5} \div 1\frac{2}{3} = \frac{16}{5} \div \frac{5}{3} = \frac{16}{5} \times \frac{3}{5} = \frac{16 \times 3}{5 \times 5} = \frac{48}{25} = 1\frac{23}{25}$

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

Mathematics

(Chapter – 2) (Fractions and Decimals) (Exercise 2.4)
(Class – VII)

Question 1:

Find:

(i) 0.2×6

(ii) 8×4.6

(iii) 2.71×5

(iv) 20.1×4

(v) 0.05×7

(vi) 211.02×4

(vii) 2×0.86

Answer 1:

(i) $0.2 \times 6 = 1.2$

(ii) $8 \times 4.6 = 36.8$

(iii) $2.71 \times 5 = 13.55$

(iv) $20.1 \times 4 = 80.4$

(v) $0.05 \times 7 = 0.35$

(vi) $211.02 \times 4 = 844.08$

(vii) $2 \times 0.86 = 1.72$

Question 2:

Find the area of rectangle whose length is 5.7 cm and breadth is 3 cm.

Answer 2:

Given: Length of rectangle = 5.7 cm and

Breadth of rectangle = 3 cm

Area of rectangle = Length x Breadth = $5.7 \times 3 = 17.1$ cm^2

Thus, the area of rectangle is 17.1 cm^2.

Question 3:

Find:

(i) 1.3×10

(ii) 36.8×10

(iii) 153.7×10

(iv) 168.07×10

(v) 31.1×100

(vi) 156.1×100

(vii) 3.62×100

(viii) 43.07×100

(ix) 0.5×10

(x) 0.08×10

(xi) 0.9×100

(xii) 0.03×1000

Answer 3:

(i) $1.3 \times 10 = 13.0$

(ii) $36.8 \times 10 = 368.0$

(iii) $153.7 \times 10 = 1537.0$

(iv) $168.07 \times 10 = 1680.7$

(v) $31.1 \times 100 = 3110.0$

(vi) $156.1 \times 100 = 15610.0$

(vii) $3.62 \times 100 = 362.0$

(viii) $43.07 \times 100 = 4307.0$

(ix) $0.5 \times 10 = 5.0$

(x) $0.08 \times 10 = 0.80$

(xi) $0.9 \times 100 = 90.0$

(xii) $0.03 \times 1000 = 30.0$

Question 4:

A two-wheeler covers a distance of 55.3 km in one litre of petrol. How much distance will it cover in 10 litres of petrol?

Answer 4:

$\because$ In one litre, a two-wheeler covers a distance = 55.3 km

$\therefore$ In 10 litres, a two- wheeler covers a distance = $55.3 \times 10 = 553.0$ km

Thus, 553 km distance will be covered by it in 10 litres of petrol.

Question 5:

Find:

(i) 2.5×0.3

(ii) 0.1×51.7

(iii) 0.2×316.8

(iv) 1.3×3.1

(v) 0.5×0.05

(vi) 11.2×0.15

(vii) 1.07×0.02

(viii) 10.05×1.05

(ix) 101.01×0.01

(x) 100.01×1.1

Answer 5:

(i) $2.5 \times 0.3 = 0.75$

(ii) $0.1 \times 51.7 = 5.17$

(iii) $0.2 \times 316.8 = 63.36$

(iv) $1.3 \times 3.1 = 4.03$

(v) $0.5 \times 0.05 = 0.025$

(vi) $11.2 \times 0.15 = 1.680$

(vii) $1.07 \times 0.02 = 0.0214$

(viii) $10.05 \times 1.05 = 10.5525$

(ix) $101.01 \times 0.01 = 1.0101$

(x) $100.01 \times 1.1 = 110.11$

Mathematics

(Chapter – 2) (Fractions and Decimals) (Exercise 2.5)
(Class – VII)

Question 1:

Find:

(i) $0.4 \div 2$

(ii) $0.35 \div 5$

(iii) $2.48 \div 4$

(iv) $65.4 \div 6$

(v) $651.2 \div 4$

(vi) $14.49 \div 7$

(vii) $3.96 \div 4$

(viii) $0.80 \div 5$

Answer 1:

(i) $0.4 \div 2 = \frac{4}{10} \times \frac{1}{2} = \frac{2}{10} = 0.2$

(ii) $0.35 \div 5 = \frac{35}{100} \times \frac{1}{5} = \frac{7}{100} = 0.07$

(iii) $2.48 \div 4 = \frac{248}{100} \times \frac{1}{4} = \frac{62}{100} = 0.62$

(iv) $65.4 \div 6 = \frac{654}{10} \times \frac{1}{6} = \frac{109}{10} = 10.9$

(v) $651.2 \div 4 = \frac{6512}{10} \times \frac{1}{4} = \frac{1628}{10} = 162.8$

(vi) $14.49 \div 7 = \frac{1449}{100} \times \frac{1}{7} = \frac{207}{100} = 2.07$

(vii) $3.96 \div 4 = \frac{396}{100} \times \frac{1}{4} = \frac{99}{100} = 0.99$

(viii) $0.80 \div 5 = \frac{80}{100} \times \frac{1}{5} = \frac{16}{100} = 0.16$

Question 2:

Find:

(i) $4.8 \div 10$ **(ii)** $52.5 \div 10$ **(iii)** $0.7 \div 10$

(iv) $33.1 \div 10$ **(v)** $272.23 \div 10$ **(vi)** $0.56 \div 10$

(vii) $3.97 \div 10$

Answer 2:

(i) $4.8 \div 10 = \frac{4.8}{10} = 0.48$ **(ii)** $52.5 \div 10 = \frac{52.5}{10} = 5.25$

(iii) $0.7 \div 10 = \frac{0.7}{10} = 0.07$ **(iv)** $33.1 \div 10 = \frac{33.1}{10} = 3.31$

(v) $272.23 \div 10 = \frac{272.23}{10} = 27.223$ **(vi)** $0.56 \div 10 = \frac{0.56}{10} = 0.056$

(vii) $3.97 \div 10 = \frac{3.97}{10} = 0.397$

Question 3:

Find:

(i) $2.7 \div 100$

(ii) $0.3 \div 100$

(iii) $0.78 \div 100$

(iv) $432.6 \div 100$

(v) $23.6 \div 100$

(vi) $98.53 \div 100$

Answer 3:

(i) $2.7 \div 100 = \frac{27}{10} \times \frac{1}{100} = \frac{27}{1000} = 0.027$

(ii) $0.3 \div 100 = \frac{3}{10} \times \frac{1}{100} = \frac{3}{1000} = 0.003$

(iii) $0.78 \div 100 = \frac{78}{100} \times \frac{1}{100} = \frac{78}{10000} = 0.0078$

(iv) $432.6 \div 100 = \frac{4326}{10} \times \frac{1}{100} = \frac{4326}{1000} = 4.326$

(v) $23.6 \div 100 = \frac{236}{10} \times \frac{1}{100} = \frac{236}{1000} = 0.236$

(vi) $98.53 \div 100 = \frac{9853}{100} \times \frac{1}{100} = \frac{9853}{10000}$ 0.9853

Question 4:

Find:

(i) $7.9 \div 1000$

(ii) $26.3 \div 1000$

(iii) $38.53 \div 1000$

(iv) $128.9 \div 1000$

(v) $0.5 \div 1000$

Answer 4:

(i) $7.9 \div 1000 = \frac{79}{10} \times \frac{1}{1000} = \frac{79}{10000} = 0.0079$

(ii) $26.3 \div 1000 = \frac{263}{10} \times \frac{1}{1000} = \frac{263}{10000} = 0.0263$

(iii) $38.53 \div 1000 = \frac{3853}{100} \times \frac{1}{1000} = \frac{3853}{100000} = 0.03853$

(iv) $128.9 \div 1000 = \frac{1289}{10} \times \frac{1}{1000} = \frac{1289}{10000} = 0.1289$

(v) $0.5 \div 1000 = \frac{5}{10} \times \frac{1}{1000} = \frac{5}{10000} = 0.0005$

Question 5:

Find:

(i) $7 \div 3.5$

(ii) $36 \div 0.2$

(iii) $3.25 \div 0.5$

(iv) $30.94 \div 0.7$

(v) $0.5 \div 0.25$

(vi) $7.75 \div 0.25$

(vii) $76.5 \div 0.15$

(viii) $37.8 \div 1.4$

(ix) $2.73 \div 1.3$

Answer 5:

(i) $7 \div 3.5 = 7 \div \frac{35}{10} = 7 \times \frac{10}{35} = \frac{10}{5} = 2$

(ii) $36 \div 0.2 = 36 \div \frac{2}{10} = 36 \times \frac{10}{2} = 18 \text{ x } 10 = 180$

(iii) $3.25 \div 0.5 = \frac{325}{100} \div \frac{5}{10} = \frac{325}{100} \times \frac{10}{5} = \frac{65}{10} = 6.5$

(iv) $30.94 \div 0.7 = \frac{3094}{100} \div \frac{7}{10} = \frac{3094}{100} \times \frac{10}{7} = \frac{442}{10} = 44.2$

(v) $0.5 \div 0.25 = \frac{5}{10} \div \frac{25}{100} = \frac{5}{10} \times \frac{100}{25} = \frac{10}{5} = 2$

(vi) $7.75 \div 0.25 = \frac{775}{100} \div \frac{25}{100} = \frac{775}{100} \times \frac{100}{25} = 31$

(vii) $76.5 \div 0.15 = \frac{765}{10} \div \frac{15}{100} = \frac{765}{10} \times \frac{100}{15} = 51 \text{ x } 10 = 510$

(viii) $37.8 \div 1.4 = \frac{378}{10} \div \frac{14}{10} = \frac{378}{10} \times \frac{10}{14} = 27$

(ix) $2.73 \div 1.3 = \frac{273}{100} \div \frac{13}{10} = \frac{273}{100} \times \frac{10}{13} = \frac{21}{10} = 2.1$

Question 6:

A vehicle covers a distance of 43.2 km in 2.4 litres of petrol. How much distance will it cover in one litre petrol?

Answer 6:

$\because$ In 2.4 litres of petrol, distance covered by the vehicle = 43.2 km

$\therefore$ In 1 litre of petrol, distance covered by the vehicle

$= 43.2 \div 2.4$

$= \frac{432}{10} \div \frac{24}{10} = \frac{432}{10} \times \frac{24}{10}$

$= 18$ km

Thus, it covered 18 km distance in one litre of petrol.