Mathematics

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

Exercise 2.1

Question 1:

Solve:

(i) $2 - \dfrac{3}{5}$ (ii) $4 + \dfrac{7}{8}$

(iii) $\dfrac{3}{5} + \dfrac{2}{7}$ (iv) $\dfrac{9}{11} - \dfrac{4}{15}$

(v) $\dfrac{7}{10} + \dfrac{2}{5} + \dfrac{3}{2}$ (vi) $2\dfrac{2}{3} + 3\dfrac{1}{2}$

(vii) $8\dfrac{1}{2} - 3\dfrac{5}{8}$

Answer 1:

(i) $2 - \dfrac{3}{5} = \dfrac{10-3}{5} = \dfrac{7}{5} = 1\dfrac{2}{5}$

(ii) $4 + \dfrac{7}{8} = \dfrac{32+7}{8} = \dfrac{39}{8} = 4\dfrac{7}{8}$

(iii) $\dfrac{3}{5} + \dfrac{2}{7} = \dfrac{21+10}{35} = \dfrac{31}{35}$

(iv) $\dfrac{9}{11} - \dfrac{4}{15} = \dfrac{135-44}{165} = \dfrac{91}{165}$

(v) $\dfrac{7}{10} + \dfrac{2}{5} + \dfrac{3}{2} = \dfrac{7+4+15}{10} = \dfrac{26}{10} = \dfrac{13}{5} = 2\dfrac{3}{5}$

(vi) $2\dfrac{2}{3} + 3\dfrac{1}{2} = \dfrac{8}{3} + \dfrac{7}{2} = \dfrac{16+21}{6} = \dfrac{37}{6} = 6\dfrac{1}{6}$

(vii) $8\dfrac{1}{2} - 3\dfrac{5}{8} = \dfrac{17}{2} - \dfrac{29}{8} = \dfrac{68-19}{8} = \dfrac{39}{8} = 4\dfrac{7}{8}$

Question 2:

Arrange the following in descending order:

(i) $\dfrac{2}{9}, \dfrac{2}{3}, \dfrac{8}{21}$ (ii) $\dfrac{1}{5}, \dfrac{3}{7}, \dfrac{7}{10}$

Answer 2:

(i) $\dfrac{2}{9}, \dfrac{2}{3}, \dfrac{8}{21}$

$\Rightarrow$ $\dfrac{14}{63}, \dfrac{42}{63}, \dfrac{24}{63}$ [Converting into like fractions]

$\Rightarrow$ $\dfrac{42}{63} > \dfrac{24}{63} > \dfrac{14}{63}$ [Arranging in descending order]

Therefore, $\dfrac{2}{3} > \dfrac{8}{21} > \dfrac{2}{9}$

(ii) $\dfrac{1}{5}, \dfrac{3}{7}, \dfrac{7}{10}$

$\Rightarrow$ $\dfrac{14}{70}, \dfrac{30}{70}, \dfrac{49}{70}$ [Converting into like fractions]

$\Rightarrow$ $\dfrac{49}{70} > \dfrac{30}{70} > \dfrac{14}{70}$ [Arranging in descending order]

Therefore, $\dfrac{7}{10} > \dfrac{3}{7} > \dfrac{1}{5}$

Question 3:

In a "magic square", the sum of the numbers in each row, in each column and along the diagonals is the same. Is this a magic square?
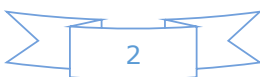
$\dfrac{4}{11}$	$\dfrac{9}{11}$	$\dfrac{2}{11}$
$\dfrac{3}{11}$	$\dfrac{5}{11}$	$\dfrac{7}{11}$
$\dfrac{8}{11}$	$\dfrac{1}{11}$	$\dfrac{6}{11}$

$\left(\text{Along the first row } \dfrac{4}{11} + \dfrac{9}{11} + \dfrac{2}{11} = \dfrac{15}{11} \right)$

Answer 3:

Sum of first row $= \dfrac{4}{11} + \dfrac{9}{11} + \dfrac{2}{11} = \dfrac{15}{11}$ [Given]

2

Sum of second row	$= \dfrac{3}{11}+\dfrac{5}{11}+\dfrac{7}{11}=\dfrac{3+5+7}{11}=\dfrac{15}{11}$
Sum of third row	$= \dfrac{8}{11}+\dfrac{1}{11}+\dfrac{6}{11}=\dfrac{8+1+6}{11}=\dfrac{15}{11}$
Sum of first column	$= \dfrac{4}{11}+\dfrac{3}{11}+\dfrac{8}{11}=\dfrac{4+3+8}{11}=\dfrac{15}{11}$
Sum of second column	$= \dfrac{9}{11}+\dfrac{5}{11}+\dfrac{1}{11}=\dfrac{9+5+1}{11}=\dfrac{15}{11}$
Sum of third column	$= \dfrac{2}{11}+\dfrac{7}{11}+\dfrac{6}{11}=\dfrac{2+7+6}{11}=\dfrac{15}{11}$
Sum of first diagonal (left to right)	$= \dfrac{4}{11}+\dfrac{5}{11}+\dfrac{6}{11}=\dfrac{4+5+6}{11}=\dfrac{15}{11}$
Sum of second diagonal (left to right)	$= \dfrac{2}{11}+\dfrac{5}{11}+\dfrac{8}{11}=\dfrac{2+5+8}{11}=\dfrac{15}{11}$

Since the sum of fractions in each row, in each column and along the diagonals are same, therefore it is a magic square.

Question 4:

A rectangular sheet of paper is $12\dfrac{1}{2}$ cm long and $10\dfrac{2}{3}$ cm wide. Find its perimeter.

Answer 4:

Given: The sheet of paper is in rectangular form.

Length of sheet = $12\dfrac{1}{2}$ cm and Breadth of sheet = $10\dfrac{2}{3}$ cm

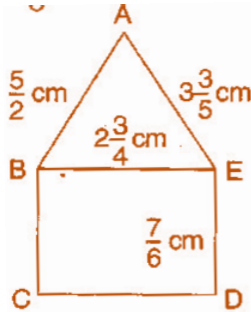Perimeter of rectangle = 2 (length + breadth)

$$= 2\left(12\dfrac{1}{2}+10\dfrac{2}{3}\right) = 2\left(\dfrac{25}{2}+\dfrac{32}{3}\right)$$

$$= 2\left(\dfrac{25\times 3+32\times 2}{6}\right) = 2\left(\dfrac{75+64}{6}\right)$$

$$= 2\times\dfrac{139}{6} = \dfrac{139}{3}=46\dfrac{1}{3} \text{ cm.}$$

Thus, the perimeter of the rectangular sheet is $46\dfrac{1}{3}$ cm.

Question 5:

Find the perimeter of (i) △ABE, (ii) the rectangle BCDE in this figure. Whose perimeter is greater?

Answer 5:

(i) In △ABE, AB = $\frac{5}{2}$ cm, BE = $2\frac{3}{4}$ cm, AE = $3\frac{3}{5}$ cm

The perimeter of △ABE   = AB + BE + AE

$$= \frac{5}{2} + 2\frac{3}{4} + 3\frac{3}{5} = \frac{5}{2} + \frac{11}{4} + \frac{18}{5}$$

$$= \frac{50 + 55 + 72}{20} = \frac{177}{20} = 8\frac{17}{20} \text{ cm}$$

Thus, the perimeter of △ABE is $8\frac{17}{20}$ cm.

(ii) In rectangle BCDE,   BE = $2\frac{3}{4}$ cm, ED = $\frac{7}{6}$ cm

Perimeter of rectangle   = 2 (length + breadth)

$$= 2\left(2\frac{3}{4} + \frac{7}{6}\right) = 2\left(\frac{11}{4} + \frac{7}{6}\right)$$

$$= 2\left(\frac{33 + 14}{12}\right) = \frac{47}{6} = 7\frac{5}{6} \text{ cm}$$

Thus, the perimeter of rectangle BCDE is $7\frac{5}{6}$ cm.

Comparing the perimeter of triangle and that of rectangle,

$$8\frac{17}{20} \text{ cm} > 7\frac{5}{6} \text{ cm}$$

Therefore, the perimeter of triangle ABE is greater than that of rectangle BCDE.

Question 6:

Salil wants to put a picture in a frame. The picture is $7\frac{3}{5}$ cm wide. To fit in the frame the picture cannot be more than $7\frac{3}{10}$ cm wide. How much should the picture be trimmed?

Answer 6:

Given: The width of the picture $= 7\frac{3}{5}$ cm

and the width of picture frame $= 7\frac{3}{10}$ cm

Therefore, the picture should be trimmed $= 7\frac{3}{5} - 7\frac{3}{10} = \frac{38}{5} - \frac{73}{10}$

$$= \frac{76-73}{10} = \frac{3}{10} \text{ cm}$$

Thus, the picture should be trimmed by $\frac{3}{10}$ cm.

Question 7:

Ritu ate $\frac{3}{5}$ part of an apple and the remaining apple was eaten by her brother Somu. How much part of the apple did Somu eat? Who had the larger share? By how much?

Answer 7:

The part of an apple eaten by Ritu $= \frac{3}{5}$

The part of an apple eaten by Somu $= 1 - \frac{3}{5} = \frac{5-3}{5} = \frac{2}{5}$

Comparing the parts of apple eaten by both Ritu and Somu $\frac{3}{5} > \frac{2}{5}$

Larger share will be more by $\frac{3}{5} - \frac{2}{5} = \frac{1}{5}$ part.

Thus, Ritu's part is $\frac{1}{5}$ more than Somu's part.

Question 8:

Michael finished colouring a picture in $\frac{7}{12}$ hour. Vaibhav finished colouring the same

picture in $\frac{3}{4}$ hour. Who worked longer? By what fraction was it longer?

Answer 8:

Time taken by Michael to colour the picture = $\frac{7}{12}$ hour

Time taken by Vaibhav to colour the picture = $\frac{3}{4}$ hour

Converting both fractions in like fractions, $\frac{7}{12}$ and $\frac{3\times3}{4\times3}=\frac{9}{12}$

Here, $\frac{7}{12} < \frac{9}{12}$ $\Rightarrow$ $\frac{7}{12} < \frac{3}{4}$

Thus, Vaibhav worked longer time.

Vaibhav worked longer time by $\frac{3}{4} - \frac{7}{12} = \frac{9-7}{12} = \frac{2}{12} = \frac{1}{6}$ hour.

Thus, Vaibhav took $\frac{1}{6}$ hour more than Michael.

Exercise 2.2

Question 1:

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

(i) $2 \times \dfrac{1}{5}$ (a)

(ii) $2 \times \dfrac{1}{2}$ (b)

(iii) $3 \times \dfrac{2}{3}$ (c)

(iv) $3 \times \dfrac{1}{4}$ (d)

Answer 1:

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

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

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

(iv) – (c) Since $3 \times \dfrac{1}{4} = \dfrac{1}{4} + \dfrac{1}{4} + \dfrac{1}{4}$
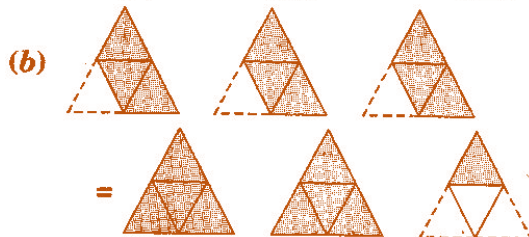
Question 2:

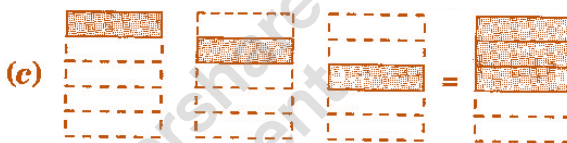Some pictures (a) to (c) are given below. Tell which of them show:

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

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

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

Answer 2:

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

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

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

Question 3:

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

(i) $7 \times \dfrac{3}{5}$ (ii) $4 \times \dfrac{1}{3}$ (iii) $2 \times \dfrac{6}{7}$ (iv) $5 \times \dfrac{2}{9}$

(v) $\dfrac{2}{3} \times 4$ (vi) $\dfrac{5}{2} \times 6$ (vii) $11 \times \dfrac{4}{7}$ (viii) $20 \times \dfrac{4}{5}$

(ix) $13 \times \dfrac{1}{3}$ (x) $15 \times \dfrac{3}{5}$

Answer 3:

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

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

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

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

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

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

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

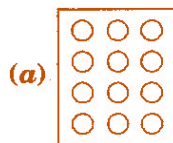(viii) $\quad 20 \times \dfrac{4}{5} = 4 \text{ x } 4 = 16$

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

(x) $\quad 15 \times \dfrac{3}{5} = 3 \text{ x } 3 = 9$
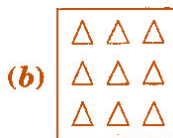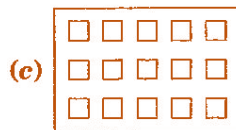
Question 4:
Shade:

(i) $\quad \dfrac{1}{2}$ of the circles in box $\qquad$ **(a)**

(ii) $\quad \dfrac{2}{3}$ of the triangles in box $\qquad$ **(b)**

(iii) $\quad \dfrac{3}{5}$ of the squares inbox $\qquad$ **(c)**

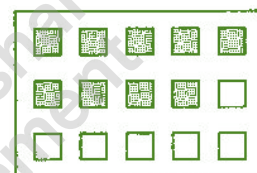## Answer 4:

(i) $\dfrac{1}{2}$ of 12 circles

$= \dfrac{1}{2} \times 12 = 6$ circles
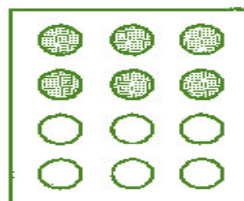
(ii) $\dfrac{2}{3}$ of 9 triangles

$= \dfrac{2}{3} \times 9 = 2 \times 3 = 6$ triangles

(iii) $\dfrac{3}{5}$ of 15 squares

$= \dfrac{3}{5} \times 15 \ \ 3 \times 3 = 9$ squares

Question 5:

Find:

(a) $\dfrac{1}{2}$ of (i) 24 (ii) 46   (b) $\dfrac{2}{3}$ of (i) 18 (ii) 27

(c) $\dfrac{3}{4}$ of (i) 16 (ii) 36   (d) $\dfrac{4}{5}$ of (i) 20 (ii) 35

Answer 5:

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

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

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

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

Question 6:

Multiply and express as a mixed fraction:

(a) $3 \times 5\frac{1}{5}$ (b) $5 \times 6\frac{3}{4}$ (c) $7 \times 2\frac{1}{4}$

(d) $4 \times 6\frac{1}{3}$ (e) $3\frac{1}{4} \times 6$ (f) $3\frac{2}{5} \times 8$

Answer 6:

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

(b) $5 \times 6\frac{3}{4} = 5 \times \frac{27}{4} = \frac{5 \times 27}{4} = \frac{135}{4} = 33\frac{3}{4}$

(c) $7 \times 2\frac{1}{4} = 7 \times \frac{9}{4} = \frac{7 \times 9}{4} = \frac{63}{4} = 15\frac{3}{4}$

(d) $4 \times 6\frac{1}{3} = 4 \times \frac{19}{3} = \frac{4 \times 19}{3} = \frac{76}{3} = 25\frac{1}{3}$

(e) $3\frac{1}{4} \times 6 = \frac{13}{4} \times 6 = \frac{13 \times 3}{2} = \frac{39}{2} = 19\frac{1}{2}$

(f) $3\frac{2}{5} \times 8 = \frac{17}{5} \times 8 = \frac{17 \times 8}{5} = \frac{136}{5} = 27\frac{1}{5}$

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 $2\frac{3}{4} = \frac{1}{2} \times 2\frac{3}{4} = \frac{1}{2} \times \frac{11}{4} = \frac{11}{8} = 1\frac{3}{8}$

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

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

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

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 = $\frac{2}{5}$ of 5 litres = $\frac{2}{5} \times 5$ = 2 litres

Thus, Vidya drank 2 litres water from the bottle.

(ii)   Pratap consumed   = $\left(1 - \frac{2}{5}\right)$ part of bottle

= $\frac{5-2}{5} = \frac{3}{5}$ 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.

Exercise 2.3

Question 1:

Find:

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

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

Answer 1:

(i)   (a) $\dfrac{1}{4}$ of $\dfrac{1}{4} = \dfrac{1}{4} \times \dfrac{1}{4} = \dfrac{1 \times 1}{4 \times 4} = \dfrac{1}{16}$

      (b) $\dfrac{1}{4}$ of $\dfrac{3}{5} = \dfrac{1}{4} \times \dfrac{3}{4} = \dfrac{1 \times 3}{4 \times 4} = \dfrac{3}{16}$

      (c) $\dfrac{1}{4}$ of $\dfrac{4}{3} = \dfrac{1}{4} \times \dfrac{4}{3} = \dfrac{1 \times 4}{4 \times 3} = \dfrac{1}{3}$

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

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

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

Question 2:

Multiply and reduce to lowest form (if possible):

(i) $\dfrac{2}{3} \times 2\dfrac{2}{3}$ (ii) $\dfrac{2}{7} \times \dfrac{7}{9}$ (iii) $\dfrac{3}{8} \times \dfrac{6}{4}$ (iv) $\dfrac{9}{5} \times \dfrac{3}{5}$

(v) $\dfrac{1}{3} \times \dfrac{15}{8}$ (vi) $\dfrac{11}{2} \times \dfrac{3}{10}$ (vii) $\dfrac{4}{5} \times \dfrac{12}{7}$

Answer 2:

(i) $\dfrac{2}{3} \times 2\dfrac{2}{3} = \dfrac{2}{3} \times \dfrac{8}{3} = \dfrac{2 \times 8}{3 \times 3} = \dfrac{16}{9} = 1\dfrac{7}{9}$

(ii) $\dfrac{2}{7} \times \dfrac{7}{9} = \dfrac{2 \times 7}{7 \times 9} = \dfrac{2}{9}$

(iii) $\dfrac{3}{8} \times \dfrac{6}{4} = \dfrac{3 \times 6}{8 \times 4} = \dfrac{3 \times 3}{8 \times 2} = \dfrac{9}{16}$

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

(v) $\dfrac{1}{3} \times \dfrac{15}{8} = \dfrac{1 \times 15}{3 \times 8} = \dfrac{1 \times 5}{1 \times 8} = \dfrac{5}{8}$

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

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

Question 3:

Multiply the following fractions:

(i) $\dfrac{2}{5} \times 5\dfrac{1}{4}$ (ii) $6\dfrac{2}{5} \times \dfrac{7}{9}$ (iii) $\dfrac{3}{2} \times 5\dfrac{1}{3}$ (iv) $\dfrac{5}{6} \times 2\dfrac{3}{7}$

(v) $3\dfrac{2}{5} \times \dfrac{4}{7}$ (vi) $2\dfrac{3}{5} \times 3$ (vii) $3\dfrac{4}{7} \times \dfrac{3}{5}$

Answer 3:

(i) $\dfrac{2}{5} \times 5\dfrac{1}{4} = \dfrac{2}{5} \times \dfrac{21}{4} = \dfrac{2 \times 21}{5 \times 4} = \dfrac{1 \times 21}{5 \times 2} = \dfrac{21}{10} = 2\dfrac{1}{10}$

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

(iii) $\dfrac{3}{2} \times 5\dfrac{1}{3} = \dfrac{3}{2} \times \dfrac{16}{3} = \dfrac{48}{6} = 8$

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

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

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

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

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 $\frac{5}{8}$

$\Rightarrow$ $\frac{2}{7}$ x $\frac{3}{4}$ or $\frac{3}{5}$ x $\frac{5}{8}$

$\Rightarrow$ $\frac{3}{14}$ 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 $\frac{3}{7}$

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

$\Rightarrow$ $\frac{3}{7}$ 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.
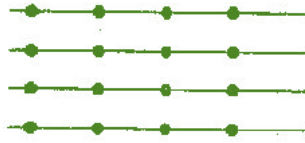
Answer 5:

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 = $3 \times \dfrac{3}{4}$ = $\dfrac{9}{4}$ m = $2\dfrac{1}{4}$ m

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

Question 6:

Lipika reads a book for $1\dfrac{3}{4}$ 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 = $1\dfrac{3}{4}$ hours.

She reads entire book in 6 days.

Now, total hours taken by her to read the entire book = $1\dfrac{3}{4} \times 6$

$$= \dfrac{7}{4} \times 6 = \dfrac{21}{2} = 10\dfrac{1}{2} \text{ hours}$$

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 $2\dfrac{3}{4}$ litres of petrol?

Answer 7:

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

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

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

Thus, the car will cover 44 km distance.

Question 8:

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

(ii) The simplest form of the number obtained in ☐ is _____.

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

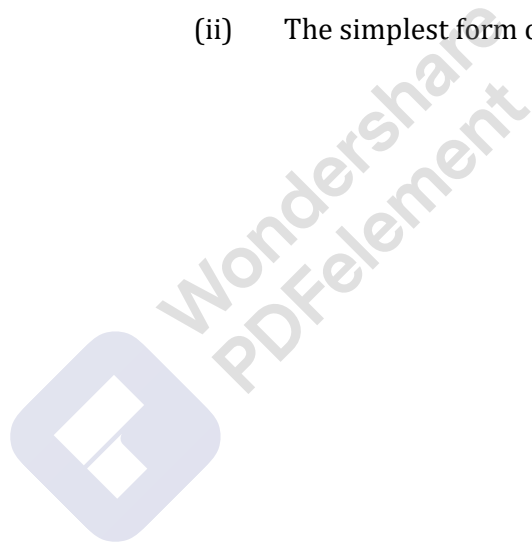(ii) The simplest form of the number obtained in ☐ is _____.

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 $\frac{8}{15}$.

5

Exercise 2.4

Question 1:

Find:

(i) $\quad 12 \div \dfrac{3}{4}$

(ii) $\quad 14 \div \dfrac{5}{6}$

(iii) $\quad 8 \div \dfrac{7}{3}$

(iv) $\quad 4 \div \dfrac{8}{3}$

(v) $\quad 3 \div 2\dfrac{1}{3}$

(vi) $\quad 5 \div 3\dfrac{4}{7}$

Answer 1:

(i) $\quad 12 \div \dfrac{3}{4} = 12 \times \dfrac{4}{3} = 16$

(ii) $\quad 14 \div \dfrac{5}{6} = 14 \times \dfrac{6}{5} = \dfrac{84}{5} = 16\dfrac{4}{5}$

(iii) $\quad 8 \div \dfrac{7}{3} = 8 \times \dfrac{3}{7} = \dfrac{24}{7} = 3\dfrac{3}{7}$

(iv) $\quad 4 \div \dfrac{8}{3} = 4 \times \dfrac{3}{8} = \dfrac{3}{2} = 1\dfrac{1}{2}$

(v) $\quad 3 \div 2\dfrac{1}{3} = 3 \div \dfrac{7}{3} = 3 \times \dfrac{3}{7} = \dfrac{9}{7} = 1\dfrac{2}{7}$

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

Question 2:

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

(i) $\quad \dfrac{3}{7}$

(ii) $\quad \dfrac{5}{8}$

(iii) $\quad \dfrac{9}{7}$

(iv) $\quad \dfrac{6}{5}$

(v) $\quad \dfrac{12}{7}$

(vi) $\quad \dfrac{1}{8}$

(vii) $\quad \dfrac{1}{11}$

Answer 2:

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

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

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

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

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

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

(vi)   Reciprocal of $\dfrac{1}{11}$ = 11 $\longrightarrow$ Whole number

Question 3:
Find:

(i) $\dfrac{7}{3} \div 2$ $\qquad$ (ii) $\dfrac{4}{9} \div 5$ $\qquad$ (iii) $\dfrac{6}{13} \div 7$

(iv) $4\dfrac{1}{3} \div 3$ $\qquad$ (v) $3\dfrac{1}{2} \div 4$ $\qquad$ (vi) $4\dfrac{3}{7} \div 7$

Answer 3:

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

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

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

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

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

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

Question 4:
Find:

(i) $\dfrac{2}{5} \div \dfrac{1}{2}$ $\qquad$ (ii) $\dfrac{4}{9} \div \dfrac{2}{3}$ $\qquad$ (iii) $\dfrac{3}{7} \div \dfrac{8}{7}$

(iv) $2\dfrac{1}{3} \div \dfrac{3}{5}$ $\qquad$ (v) $3\dfrac{1}{2} \div \dfrac{8}{3}$ $\qquad$ (vi) $\dfrac{2}{5} \div 1\dfrac{1}{2}$

(vii) $3\dfrac{1}{5} \div 1\dfrac{2}{3}$ $\qquad$ (viii) $2\dfrac{1}{5} \div 1\dfrac{1}{5}$

2

Answer 4:

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

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

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

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

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

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

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

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

Exercise 2.5

Question 1:

Which is greater:

(i)	0.5 or 0.05	(ii)	0.7 or 0.5	(iii)	7 or 0.7
(iv)	1.37 or 1.49	(v)	2.03 or 2.30	(vi)	0.8 or 0.88

Answer 1:

(i)	0.5 > 0.05	(ii)	0.7 > 0.5	(iii)	7 > 0.7
(iv)	1.37 < 1.49	(v)	2.03 < 2.30	(vi)	0.8 < 0.88

Question 2:

Express as rupees using decimals:

(i)	7 paise	(ii)	7 rupees 7 paise
(iii)	77 rupees 77 paise	(iv)	50 paise
(v)	235 paise

Answer 2:

$\because$ 100 paise = ₹1

$\therefore$ 1 paisa = ₹ $\dfrac{1}{100}$

(i)   7 paise = ₹ $\dfrac{7}{100}$ = ₹ 0.07

(ii)   7 rupees 7 paise = ₹ 7 + ₹ $\dfrac{7}{100}$ = ₹ 7 + ₹ 0.07 = ₹ 7.07

(iii)   77 rupees 77 paise = ₹ 77 + ₹ $\dfrac{77}{100}$ = ₹ 77 + ₹ 0.77 = ₹ 77.77

(iv)   50 paise = ₹ $\dfrac{50}{100}$ = ₹ 0.50

(v)   235 paise = ₹ $\dfrac{235}{100}$ = ₹ 2.35

Question 3:

(i)   Express 5 cm in metre and kilometer.

(ii)   Express 35 mm in cm, m and km.

Answer 3:

(i)   Express 5 cm in meter and kilometer.

∵   100 cm = 1 meter

∴ $1 \text{ cm} = \dfrac{1}{100}$ meter

⇒ $5 \text{ cm} = \dfrac{5}{100} = 0.05$ meter.

Now,

∵   1000 meters = 1 kilometers

∴ $1 \text{ meter} = \dfrac{1}{1000}$ kilometer

⇒ $0.05 \text{ meter} = \dfrac{0.05}{1000} = 0.00005$ kilometer

(ii)   Express 35 mm in cm, m and km.

∵   10 mm = 1 cm

∴ $1 \text{ mm} = \dfrac{1}{10}$ cm

⇒ $35 \text{ mm} = \dfrac{35}{10} = 3.5$ cm

Now,   ∵   100 cm = 1 meter

∴ $1 \text{ cm} = \dfrac{1}{100}$ meter

⇒ $3.5 \text{ cm} = \dfrac{3.5}{100} = 0.035$ meter

Again,

∵   1000 meters = 1 kilometers

∴ $1 \text{ meter} = \dfrac{1}{1000}$ kilometer

⇒ $0.035 \text{ meter} = \dfrac{0.035}{1000} = 0.000035$ kilometer

Question 4:

Express in kg.:

(i)   200 g   (ii)   3470 g   (iii)   4 kg 8 g

Answer 4:

Let us consider,

1000 g = 1 kg

$\Rightarrow$ $1 \text{ g} = \dfrac{1}{1000} \text{ kg}$

(i) $200 \text{ g} = \left(200 \times \dfrac{1}{1000}\right) \text{ kg} = 0.2 \text{ kg}$

(ii) $3470 \text{ g} = \left(3470 \times \dfrac{1}{1000}\right) \text{ kg} = 3.470 \text{ kg}$

(iii) $4 \text{ kg } 8 \text{ g} = 4 \text{ kg} + \left(8 \times \dfrac{1}{1000}\right) \text{ kg} = 4 \text{ kg} + 0.008 \text{ kg} = 4.008 \text{ kg}$

Question 5:

Write the following decimal numbers in the expanded form:

(i)   20.03   (ii)   2.03   (iii)   200.03   (iv)   2.034

Answer 5:

(i) $20.03 = 2 \times 10 + 0 \times 1 + 0 \times \dfrac{1}{10} + 3 \times \dfrac{1}{100}$

(ii) $2.03 = 2 \times 1 + 0 \times \dfrac{1}{10} + 3 \times \dfrac{1}{100}$

(iii) $200.03 = 2 \times 100 + 0 \times 10 + 0 \times 1 + 0 \times \dfrac{1}{10} + 3 \times \dfrac{1}{100}$

(iv) $2.034 = 2 \times 1 + 0 \times \dfrac{1}{10} + 3 \times \dfrac{1}{100} + 4 \times \dfrac{1}{1000}$

Question 6:

Write the place value of 2 in the following decimal numbers:

(i)   2.56   (ii)   21.37   (iii)   10.25

(iv)   9.42   (v)   63.352

Answer 6:

   (i)   Place value of 2 in 2.56 = 2 x 1 = 2 ones

   (ii)   Place value of 2 in 21.37 = 2 x 10 = 2 tens

   (iii)   Place value of 2 in 10.25 = $2 \times \dfrac{1}{10}$ = 2 tenths

   (iv)   Place value of 2 in 9.42 = $2 \times \dfrac{1}{100}$ = 2 hundredth

   (v)   Place value of 2 in 63.352 = $2 \times \dfrac{1}{1000}$ = 2 thousandth

Question 7:

Dinesh went from place A to place B and from there to place C. A is 7.5 km from B and B is 12.7 km from C. Ayub went from place A to place D and from there to place C. D is 9.3 km from A and C is 11.8 km from D. Who travelled more and by how much?
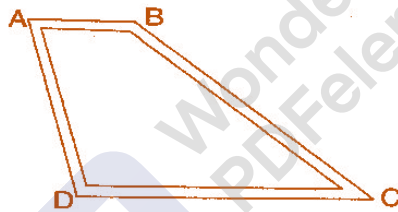
Answer 7:

Distance travelled by Dinesh when he went from place A to place B = 7.5 km and from place B to C = 12.7 km.
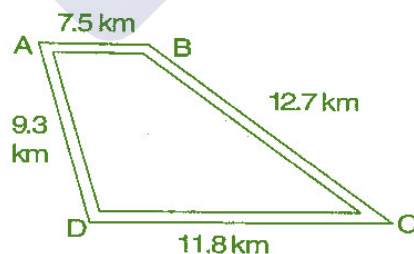
Total distance covered by Dinesh = AB + BC
                                  = 7.5 + 12.7 = 20.2 km
Total distance covered by Ayub = AD + DC
                                    = 9.3 + 11.8 = 21.1 km
On comparing the total distance of Ayub and Dinesh,
                                21.1 km > 20.2 km
Therefore, Ayub covered more distance by 21.1 – 20.2 = 0.9 km = 900 m

4

Question 8:

Shyam bought 5 kg 300 g apples and 3 kg 250 g mangoes. Sarala bought 4 kg 800 g oranges and 4 kg 150 g bananas. Who bought more fruits?

Answer 8:

Total weight of fruits bought by Shyam = 5 kg 300 g + 3 kg 250 g = 8 kg 550 g
Total weight of fruits bought by Sarala = 4 kg 800 g + 4 kg 150 g = 8 kg 950 g

On comparing the quantity of fruits, 8 kg 550 g < 8 kg 950 g
Therefore, Sarala bought more fruits.

Question 9:

How much less is 28 km than 42.6 km?

Answer 9:

We have to find the difference of 42.6 km and 28 km.
Difference = 42.6 – 28.0 = 14.6 km
Therefore 14.6 km less is 28 km than 42.6 km.

Exercise 2.6

Question 1:

Find:

(i)	0.2 x 6	(ii)	8 x 4.6	(iii)	2.71 x 5
(iv)	20.1 x 4	(v)	0.05 x 7	(vi)	211.02 x 4
(vii)	2 x 0.86				

Answer 1:

(i)	0.2 x 6 = 1.2	(ii)	8 x 4.6 = 36.8
(iii)	2.71 x 5 = 13.55	(iv)	20.1 x 4 = 80.4
(v)	0.05 x 7 = 0.35	(vi)	211.02 x 4 = 844.08
(vii)	2 x 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 x 3 = 17.1 cm^2

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

Question 3:

Find:

(i)	1.3 x 10	(ii)	36.8 x 10	(iii)	153.7 x 10
(iv)	168.07 x 10	(v)	31.1 x 100	(vi)	156.1 x 100
(vii)	3.62 x 100	(viii)	43.07 x 100	(ix)	0.5 x 10
(x)	0.08 x 10	(xi)	0.9 x 100	(xii)	0.03 x 1000

Answer 3:

(i)	1.3 x 10 = 13.0	(ii)	36.8 x 10 = 368.0
(iii)	153.7 x 10 = 1537.0	(iv)	168.07 x 10 = 1680.7
(v)	31.1 x 100 = 3110.0	(vi)	156.1 x 100 = 15610.0
(vii)	3.62 x 100 = 362.0	(viii)	43.07 x 100 = 4307.0
(ix)	0.5 x 10 = 5.0	(x)	0.08 x 10 = 0.80
(xi)	0.9 x 100 = 90.0	(xii)	0.03 x 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:

∵   In one litre, a two-wheeler covers a distance = 55.3 km

∴   In 10 litres, a two- wheeler covers a distance = 55.3 x 10 = 553.0 km

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

Question 5:

Find:

(i)	2.5 x 0.3	(ii)	0.1 x 51.7	(iii)	0.2 x 316.8
(iv)	1.3 x 3.1	(v)	0.5 x 0.05	(vi)	11.2 x 0.15
(vii)	1.07 x 0.02	(viii)	10.05 x 1.05	(ix)	101.01 x 0.01
(x)	100.01 x 1.1				

Answer 5:

(i)	2.5 x 0.3 = 0.75	(ii)	0.1 x 51.7 = 5.17
(iii)	0.2 x 316.8 = 63.36	(iv)	1.3 x 3.1 = 4.03
(v)	0.5 x 0.05 = 0.025	(vi)	11.2 x 0.15 = 1.680
(vii)	1.07 x 0.02 = 0.0214	(viii)	10.05 x 1.05 = 10.5525
(ix)	101.01 x 0.01 = 1.0101	(x)	100.01 x 1.1 = 110.11

2

Exercise 2.7

Question 1:

Find:

(i)	0.4 ÷ 2	(ii)	0.35 ÷ 5	(iii)	2.48 ÷ 4	
(iv)	65.4 ÷ 6	(v)	651.2 ÷ 4	(v)	14.49 ÷ 7	
(vii)	3.96 ÷ 4	(viii)	0.80 ÷ 5			

Answer 1:

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

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

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

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

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

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

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

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

Question 2:

Find:

(i)	4.8 ÷ 10	(ii)	52.5 ÷ 10	(iii)	0.7 ÷ 10	
(iv)	33.1 ÷ 10	(v)	272.23 ÷ 10	(vi)	0.56 ÷ 10	
(vii)	3.97 ÷ 10					

Answer 2:

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

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

(v) $\quad 272.23 \div 10 = \dfrac{272.23}{10} = 27.223$ (vi) $\quad 0.56 \div 10 = \dfrac{0.56}{10} = 0.056$

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

Question 3:

Find:

(i) $\quad 2.7 \div 100$	(ii) $\quad 0.3 \div 100$	(iii) $\quad 0.78 \div 100$	
(iv) $\quad 432.6 \div 100$	(v) $\quad 23.6 \div 100$	(vi) $\quad 98.53 \div 100$	

Answer 3:

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

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

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

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

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

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

Question 4:

Find:

(i) $\quad 7.9 \div 1000$	(ii) $\quad 26.3 \div 1000$	(iii) $\quad 38.53 \div 1000$
(iv) $\quad 128.9 \div 1000$	(v) $\quad 0.5 \div 1000$	

Answer 4:

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

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

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

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

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

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) $7 \div 3.5 = 7 \div \dfrac{35}{10} = 7 \times \dfrac{10}{35} = \dfrac{10}{5} = 2$

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

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

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

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

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

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

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

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

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:

∵ In 2.4 litres of petrol, distance covered by the vehicle = 43.2 km

∴ In 1 litre of petrol, distance covered by the vehicle = 43.2 ÷ 2.4

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

$$= 18 \text{ km}$$

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