

Worksheet -15

Subject: - Mathematics

Class: - VII

Teacher: - Ms. Neeru

Name: _____ Class & Sec: _____ Roll No. _____ Date:22.05.2020

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 Learned About Decimal Numbers

(Chapter – 2) (Fractions and Decimals)

(Class – VII)

Exercise – 2.4

Question 1

(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 reciprocals of each of the fractions. Classify the reciprocals as proper, 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	$\frac{3}{7} = \frac{7}{3}$	→ Improper fraction
(ii)	Reciprocal of	$\frac{5}{8} = \frac{8}{5}$	→ Improper fraction
(iii)	Reciprocal of	$\frac{9}{7} = \frac{7}{9}$	→ Proper fraction
(iv)	Reciprocal of	$\frac{6}{5} = \frac{5}{6}$	→ Proper fraction
(v)	Reciprocal of	$\frac{12}{7} = \frac{7}{12}$	→ Proper fraction
(vi)	Reciprocal of	$\frac{1}{8} = 8$	→ Whole number
(vii)	Reciprocal of	$\frac{1}{11} = 11$	→ 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

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

Exercise 2.3

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



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.

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

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) $\frac{2}{3} \times \frac{5}{10} = \frac{10}{30}$

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

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

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

EX2.2 Q8



8. Vidya and Pratap went for a picnic. Their mother gave them a water bag that contained 5 litres of water. Vidya consumed $\frac{2}{5}$ of the water. Pratap consumed the remaining water.
- How much water did Vidya drink?
 - What fraction of the total quantity of water did Pratap drink?

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.

- How much water did Vidya drink?
- 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.