# **Chapter 5: Decimal Fractions**

# PRACTICE SET 14 [PAGES 30 - 31]

#### Practice Set 14 | Q 1 | Page 30

In the table below, write the place value of each of the digits in the number 378.025.

Place	Hundreds	Tens	Units	Tenths	Hundredths	Thousandths
	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
Digit	3	7	8	0	2	5
Place value	300			$\frac{0}{10}=0$		$rac{5}{1000} = 0.005$

### SOLUTION

Place	Hundreds	Tens	Units	Tenths	Hundredths	Thousandths
	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
Digit	3	7	8	0	2	5
Place value	300	7 imes 10 = 70	8  imes 1 = 8	$\frac{0}{10} = 0$	$rac{2}{100} = 0.02$	$rac{5}{1000} = 0.005$

### Practice Set 14 | Q 2.1 | Page 30

Solve: 905.5 + 27.197

# SOLUTION

1 905.500 <u>+ 27.197</u> <u>932.697</u> ∴ 905.5 + 27.197 = 932.697

# Practice Set 14 | Q 2.2 | Page 30

Solve:



39 + 700.65

### SOLUTION

39.00

+ 700.65

<u>739.65</u>

∴ 39 + 700.65 = 739.65

# Practice Set 14 | Q 2.3 | Page 30

Solve: 40 + 27.7 + 2.451

### SOLUTION

11

40.000

+ 27.700

<u>+ 2.451</u>

70.151

∴ 40 + 27.7 + 2.451 = 70.151

Practice Set 14 | Q 3.1 | Page 30 Subtract: 85.96 – 2.345

### SOLUTION

5 10 8 5. 9 <del>6 0</del> <u>- 2 . 3 4 5</u> <u>8 3. 6 1 5</u>

∴ 85.96 – 2.345 = 83.615

### Practice Set 14 | Q 3.2 | Page 30 Subtract: 632.24 – 97.45

- 5 12 11 11 14
- <del>632.24</del>
- <u>- 97.45</u>
- 534.79
- ∴ 632.24 97.45 = 534.79

### Practice Set 14 | Q 3.3 | Page 30

Subtract: 200.005 – 17.186

### SOLUTION

1999915 <del>200.005</del> - <u>17.186</u> <u>182.819</u>

∴ 200.005 – 17.186 = 182.819

### Practice Set 14 | Q 4 | Page 31

Avinash travelled 42 km 365 m by bus, 12 km 460 m by car, and walked 640 m. How many kilometres did he travel altogether? (Write your answer in decimal fractions).

### SOLUTION

Distance travelled by bus = 42 km 365 m

= 42 km + 365 m  
= 42 km + 
$$\frac{365}{1000}$$
 km .....(1 km = 1000 m)  
= 42 km + 0.365 km  
= 42.365 km  
Distance travelled by car = 12 km 460 m  
= 12 km + 460 m



=  $12 \text{ km} + \frac{460}{1000} \text{ km} \dots (1 \text{ km} = 1000 \text{ m})$ = 12 km + 0.460 km= 12.460 km

 $\therefore$  Total distance travelled altogether

= Distance travelled by bus + Distance travelled by car + Distance travelled by walking

- = 42.365 km + 12.460 km + 0.640 km
- = 55.465 km

	11
	42.365
	12.460
+_	0.640
	55.465

Thus, the total distance travelled by Avinash altogether is 55.465 km.

# Practice Set 14 | Q 5 | Page 31

Ayesha bought 1.80 m of cloth for her salwar and 2.25 m for her kurta. If the cloth costs 120 rupees per metre, how much must she pay the shopkeeper?

### SOLUTION

Length of cloth bought for salwar = 1.80 m

Length of cloth bought for kurta = 2.25 m

- : Total length of cloth bought
- = Length of cloth bought for salwar + Length of cloth bought for kurta
- = 1.80 m + 2.25 m
- = 4.05 m





1 1.80 <u>+ 2.25</u> 4.05

Rate of cloth = Rs 120/m

... Amount paid to the shopkeeper

= Total length of cloth bought × Rate of cloth

- = 4.05 m × ₹ 120/m
- = ₹ 486

405
×120
000
810×
405××
48600

Thus, Ayesha paid ₹ 486 to the shopkeeper.

# Practice Set 14 | Q 6 | Page 31

Sujata bought a watermelon weighing 4.25 kg and gave 1 kg 750g to the children in her neighbourhood. How much of it does she have left?

# SOLUTION

Total weight of the watermelon = 4.25 kg

Weight of the watermelon given to the children = 1 kg 750 g





: Weight of the watermelon left with her

= Total weight of the watermelon - Weight of the watermelon given to the children

- = 4.25 kg 1.75 kg
- = 2.5 kg
  - 3 12
  - <del>4</del>. <del>2</del> 5
- <u>- 1.75</u>
- 2.50

Thus, the weight of watermelon left with Sujata is 2.5 kg.

# Practice Set 14 | Q 7 | Page 31

Anita was driving at a speed of 85.6 km per hour. The road had a speed limit of 55 km per hour. By how much should she reduce her speed to be within the speed limit?

### SOLUTION

Original driving speed of Anita = 85.6 km/h

Speed limit for driving = 55 km/h

- : Speed reduced by her to be within the speed limit
- = Original driving speed of Anita Speed limit for driving
- = 85.6 km/h 55 km/h
- = 30.6 km/h

85.6

<u>- 55.0</u>

30.6

Thus, Anita needs to reduce her speed by 30.6 km/h to be within the speed limit.

### PRACTICE SET 15 [PAGE 32]

### Practice Set 15 | Q 1.1 | Page 32

Write the proper number in the empty boxes.

$$rac{3}{5}=rac{3 imes}{5 imes}=rac{10}{10}=$$





$$rac{3}{5} = rac{3 imes 2}{5 imes 2} = rac{6}{10} = 0.6$$

Practice Set 15 | Q 1.2 | Page 32

Write the proper number in the empty boxes.

$$\frac{25}{8} = \frac{25 \times}{8 \times 125} = \frac{1000}{1000} = 3.125$$

### SOLUTION

$$\frac{25}{8} = \frac{25 \times 125}{8 \times 125} = \frac{3125}{1000} = 3.125$$

### Practice Set 15 | Q 1.3 | Page 32

Write the proper number in the empty boxes.

$$\frac{21}{2} = \frac{21\times}{2\times} = \frac{10}{10} = 10$$

### SOLUTION

$$\frac{21}{2} = \frac{21 \times 5}{2 \times 5} = \frac{105}{10} = 10.5$$

### Practice Set 15 | Q 1.4 | Page 32

Write the proper number in the empty boxes.

$$\frac{22}{40} = \frac{11}{20} = \frac{11 \times}{20 \times 5} = \frac{11}{100} =$$

### SOLUTION

$$\frac{22}{40} = \frac{11}{20} = \frac{11 \times 5}{20 \times 5} = \frac{55}{100} = 0.55$$

### Practice Set 15 | Q 2.1 | Page 32

Convert the common fraction into a decimal fraction.  $\frac{3}{4}$ 





$$\frac{3}{4} = \frac{3 \times 25}{4 \times 25} = \frac{75}{100} = 0.75$$

Practice Set 15 | Q 2.2 | Page 32

Convert the common fraction into a decimal fraction.

 $\frac{4}{5}$ 

# SOLUTION

 $\frac{4}{5} = \frac{4 \times 2}{5 \times 2} = \frac{8}{10} = 0.8$ 

### Practice Set 15 | Q 2.3 | Page 32

Convert the common fraction into a decimal fraction.

 $\frac{9}{8}$ 

### SOLUTION

 $\frac{9}{8} = \frac{9 \times 125}{8 \times 125} = \frac{1125}{1000} = 1.125$ 

Practice Set 15 | Q 2.4 | Page 32

Convert the common fraction into a decimal fraction.

17

20

# SOLUTION

 $\frac{17}{20} = \frac{17 \times 5}{20 \times 5} = \frac{85}{100} = 0.85$ 

### Practice Set 15 | Q 2.5 | Page 32

Convert the common fraction into a decimal fraction. 36 40





36	$36 \div 4$	$-\frac{9}{-9}$	0
$40^{-}$	$40 \div 4$	$-\frac{10}{10} = 0.5$	J

Practice Set 15 | Q 2.6 | Page 32

Convert the common fraction into a decimal fraction.

7

25

### SOLUTION

7	7  imes 4	_	28	- 0.28
25 –	25 imes 4	_	100	- 0.20

### Practice Set 15 | Q 2.7 | Page 32

Convert the common fraction into a decimal fraction.

19

200

# SOLUTION

 $\frac{19}{200} = \frac{19 \times 5}{200 \times 5} = \frac{95}{1000} = 0.095$ 

### Practice Set 15 | Q 3.1 | Page 32

Convert the decimal fraction into a common fraction. 27.5

### SOLUTION

 $27.5 = \frac{275}{10}$ 

# Practice Set 15 | Q 3.2 | Page 32

Convert the decimal fraction into a common fraction. 0.007

### SOLUTION

 $0.007 = \frac{7}{1000}$ 





### Practice Set 15 | Q 3.3 | Page 32

Convert the decimal fraction into a common fraction. 90.8

### SOLUTION

$$90.8 = \frac{908}{10}$$

### Practice Set 15 | Q 3.4 | Page 32

Convert the decimal fraction into a common fraction. 39.15

### SOLUTION

 $39.15 = \frac{3915}{100}$ 

### Practice Set 15 | Q 3.5 | Page 32

Convert the decimal fraction into a common fraction. 3.12

### SOLUTION

$$3.12 = \frac{312}{100}$$

### Practice Set 15 | Q 3.6 | Page 32

Convert the decimal fraction into a common fraction. 70.400

### SOLUTION

 $70.400 = 70.4 = \frac{704}{10}$ 

### PRACTICE SET 16 [PAGES 33 - 34]

# Practice Set 16 | Q 1 | Page 33

If, 317 × 45 = 14265, then 3.17 × 4.5 =?



3.17 × 4.5

 $= \frac{317}{100} \times \frac{45}{10}$  $= \frac{317 \times 45}{100 \times 10}$  $= \frac{14265}{1000}$ 

= 14.265

Practice Set 16 | Q 2 | Page 33 If, 503 × 217 = 109151, then 5.03 × 2.17 = ?

### SOLUTION

5.03 × 2.17

 $= \frac{503}{100} \times \frac{217}{100}$  $= \frac{503 \times 217}{100 \times 100}$  $= \frac{109151}{10000}$ 

= 10.9151

**Practice Set 16 | Q 3.1 | Page 33** Multiply: 2.7 × 1.4

### SOLUTION

 $2.7 \times 1.4 = \frac{27}{10} \times \frac{14}{10} = \frac{27 \times 14}{10 \times 10} = \frac{378}{100} = 3.78$ 

#### Practice Set 16 | Q 3.2 | Page 33 Multiply: 6.17 × 3.9

 $6.17 imes 3.9 = rac{617}{100} imes rac{39}{10} = rac{617 imes 39}{100 imes 10} = rac{24063}{1000} = 24.063$ 

Practice Set 16 | Q 3.3 | Page 33

Multiply:  $0.57 \times 2$ 

### SOLUTION

 $0.57 \times 2 = \frac{57}{100} \times \frac{2}{1} = \frac{57 \times 2}{100 \times 1} = \frac{114}{100} = 1.14$ 

Practice Set 16 | Q 3.4 | Page 33 Multiply: 5.04 × 0.7

### SOLUTION

$$5.04 \times 0.7 = rac{504}{100} imes rac{7}{10} = rac{504 imes 7}{100 imes 10} = rac{3528}{1000} = 3.528$$

### Practice Set 16 | Q 4 | Page 34

Virendra bought 18 bags of rice, each bag weighing 5.250 kg. How much rice did he buy altogether? If the rice costs 42 rupees per kg, how much did he pay for it?

### SOLUTION

Weight of each bag of rice = 5.250 kg

Number of bags of rice bought = 18

: Weight of rice bought altogether = Weight of each bag of rice × Number of bags of rice bought

$$= \frac{525}{100} \times \frac{18}{1}$$
$$= \frac{525 \times 18}{100 \times 1}$$
$$= \frac{9450}{100}$$





= 94.5 kg

Rate of rice = ₹ 42/kg

: Total amount paid for the rice = Weight of rice bought altogether × Rate of rice

= 94.5 kg × ₹ 42/kg  
= 
$$\frac{945}{10} \times \frac{42}{1}$$
  
=  $\frac{945 \times 42}{10 \times 1}$   
=  $\frac{39690}{10}$   
= ₹ 3,969

Thus, Virendra bought 94.5 kg of rice altogether and the total amount paid by him is ₹ 3,969.

15 < 3,909.

### Practice Set 16 | Q 5 | Page 34

Vedika has 23.50 metres of cloth. She used it to make 5 curtains of equal size. If each curtain required 4 metres 25 cm to make, how much cloth is left over?

### SOLUTION

Total length of the cloth = 23.50 m

Length of cloth required to make each curtain = 4 m 25 cm

$$= 4m + 25 cm$$
  
= 4m +  $\frac{25}{100}$  m .....(1 m = 100 m)  
= 4 m + 0.25 m  
= 4.25 m

Length of cloth required to make each curtain = 4 m 25 cm

Length of cloth required to make 5 curtains = Length of cloth required to make each curtain  $\times$  5





$$= 4.25 \text{ m} \times 5$$
$$= \frac{425}{100} \times \frac{5}{1}$$
$$= \frac{425 \times 5}{100 \times 1}$$
$$= \frac{2125}{100}$$
$$= 21.25 \text{ m}$$

 $\therefore$  Amount of cloth left = Total length of the cloth – Length of cloth required to make 5 curtains

- = 23.50 m 21.25 m
- = 2.25 m
  - 410
  - 23.<del>5</del> <del>0</del>
- <u>- 21.2 5</u>
- 2.2 5

Thus, the length of the cloth leftover is 2.25 m.

# PRACTICE SET 17 [PAGE 34]

Practice Set 17 | Q 1.1 | Page 34 Carry out the following division. 4.8 ÷ 2

### SOLUTION

$$4.8 \div 2 = \frac{48}{10} \div \frac{2}{1} = \frac{48}{10} \times \frac{1}{2} = \frac{24}{10} = 2.4$$

### Practice Set 17 | Q 1.2 | Page 34 Carry out the following division. 17.5 ÷ 5

### SOLUTION

$$17.5 \div 5 = \frac{175}{10} \div \frac{5}{1} = \frac{175}{10} \times \frac{1}{5} = \frac{35}{10} = 3.5$$

### Practice Set 17 | Q 1.3 | Page 34

Carry out the following division.  $20.6 \div 2$ 

### SOLUTION

$$20.6 \div 2 = \frac{206}{10} \div \frac{2}{1} = \frac{206}{10} \times \frac{1}{2} = \frac{103}{10} = 10.3$$

### Practice Set 17 | Q 1.4 | Page 34

Carry out the following division.  $32.5 \div 25$ 

#### SOLUTION

00 F . 0F	325	25	325	1	13	1.0
$32.5 \div 25 =$	10	$\frac{1}{1} =$	$\frac{10}{10}$ ×	$\overline{25}$	$=\frac{10}{10}$	= 1.3

### Practice Set 17 | Q 2 | Page 34

A road is 4 km 800 m long. If trees are planted on both its sides at intervals of 9.6 m, how many trees were planted?

### SOLUTION

Total length of the road = 4 km 800 m = 4 km + 800 m = 4000 m + 800 m .....(1 km = 1000 m) = 4800 m

Distance between two plants = 9.6 m

 $\therefore$  Number of trees planted on each side of the road = (Total length of the road  $\div$  Distance between two plants) + 1

$$= \left(\frac{4800}{1} \div \frac{96}{10}\right) + 1$$
$$= \left(\frac{4800}{1} \times \frac{10}{96}\right) + 1$$



= 500 + 1

= 501

 $\therefore$  Total number of trees planted on both sides of the road = Number of trees planted on each side of the road x 2

= 501 × 2

= 1002

Thus, the number of trees planted on both sides of the road is 1002.

# Practice Set 17 | Q 3 | Page 34

Pradnya exercises regularly by walking along a circular path on a field. If she walks a distance of 3.825 km in 9 rounds of the path, how much does she walk in one round?

# SOLUTION

Total distance walked by Pradnya in 9 rounds of the path = 3.825 km

 $\therefore$  Distance walked by Pradnya in one round of the path = Total distance walked by Pradnya in 9 rounds of the path  $\div$  9

- = 3.825 km ÷ 9
- $= \frac{3825}{1000} \div \frac{9}{1}$  $= \frac{3825}{1000} \times \frac{1}{9}$  $= \frac{425}{1000}$
- = 0.425 km

Thus, the distance walked by Pradnya in one round is 0.425 km.

# Practice Set 17 | Q 4 | Page 34

A pharmaceutical manufacturer bought 0.25 quintal of hirada, a medicinal plant, for 9500 rupees. What is the cost per quintal of hirada? (1quintal = 100 kg)

### SOLUTION

Amount paid for 0.25 quintal of hirada = ₹ 9,500

: Cost per quintal of hirada = Amount paid for 0.25 quintal of hirada ÷ 0.25





$$= ₹ 9,500 ÷ 0.25$$
  
=  $\frac{9500}{1} \div \frac{25}{100}$   
=  $\frac{9500}{1} \times \frac{100}{25}$   
=  $380 \times 100$   
= ₹ 38,000

Thus, the cost per quintal of hirada is ₹ 38,000.



