Question:1

Write each of the following as decimals:

i $\frac{8}{100}$

ii $20+\frac{9}{10}+\frac{4}{100}$

iii $23+\frac{2}{10}+\frac{6}{1000}$

Solution:

i We have 8 hundredths.

$\therefore \frac{8}{100}$ = 0.08

ii We have 2 tens, 9 tenths and 4 hundredths.

$\therefore 20 + \frac{9}{10} + \frac{4}{100} = 20 + 0.9 + 0.04$

= 20.94

iii We have 2 tens, 3 ones , 2 tenths and 6 thousandths.

$\therefore 23 + \frac{2}{10} + \frac{6}{1000} = 23 + 0.2 + 0.006$

= 23.2006

Question:2

Convert each of the following into fractions in the lowest form:

i 0.04

ii 2.34

iii 0.342

iv 17.38

Solution:

i) Multiplying and Dividing 0.04 by 100, we get:

$\frac{0.04\times100}{100} = \frac{4}{100} = \frac{1}{25}$

Thus, fraction in the lowest form is $\frac{1}{25}$.

ii) Multiplying and Dividing 2.34 by 100, we get:

$\frac{2.34\times100}{100} = \frac{234}{100} = \frac{117}{50}$

Thus, fraction in the lowest form is $\frac{117}{50}$.

iii) Multiplying and Dividing 0.342 by 1000, we get:

$\frac{0.342\times1000}{1000} = \frac{342}{1000} = \frac{171}{500}$

Therefore, fraction in the lowest form is $\frac{171}{500}$.

iv) Multiplying and Dividing 17.38 by 100, we get:

$\frac{17.38\times100}{100} = \frac{1738}{100} = \frac{869}{50}$

Thus, fraction in the lowest form is $\frac{869}{50}$.

Question:3

Express the following fractions as decimals:

i $\frac{23}{10}$

ii $25\frac{1}{8}$

iii $39\frac{7}{35}$

iv $15\frac{1}{25}$

Solution:

i) In the given fraction, we have 2 tenths and 3 ones.

$\therefore \frac{23}{10} = 2.3$

ii) Let us first convert the given fraction to a proper fraction. We get:

$25\frac{1}{8} = \frac{201}{8}$

To convert $\frac{201}{8}$ into decimals, let us multiply the numerator and denominator separately by 125. We get:

$\frac{201\times125}{8\times125} = \frac{25125}{1000} = 25.125$

iii)By simplifying $39\ \frac{7}{35}$ we get

$39\ \frac{7}{35} = 39\ \frac{1}{5}$
Now let us first convert the fraction to a proper fraction. We get:
$39\ \frac{1}{5}\ =\ \frac{196}{5}$
Now to convert $\frac{196}{5}$ into decimals, let us multiply the numerator and denominator separately by 2. We get:
$\frac{196\times2}{5\times2}\ =\ \frac{392}{10}\ =\ 39.2$

iv) Let us first convert the given fraction to a proper fraction. We get:

$15\ \frac{1}{25}$= $\frac{376}{25}$
To convert $\frac{376}{25}$ into decimals, let us multiply the numerator and denominator separately by 4. We get:

$\frac{376\times4}{25\times4} = \frac{1504}{100} = 15.04$

Question:4
Add the following:
i 41.8, 39.24, 5.01 and 62.6
ii 18.03, 146.3, 0.829 and 5.324
Solution:
i) Let us first convert the given decimals to like decimals.

We get the decimals as: 41.80, 39.24, 05.01, 62.60

Let us now add them.

$41.80\quad 39.24\quad 05.01 + 62.60 = 148.65$

ii) Let us first convert the given decimals to like decimals.

We get the decimals as: 018.030, 146.300, 000.829, 005.324.

Let us now add them.

018.030
146.300
000.829
+ 005.324
= 170.483

Question:5
Find the value of:
i 9.756 – 6.28
ii 48.1 – 0.37
iii 108.032 – 86.8
iv 100 – 26.32
Solution:
i) On converting the given decimals to like decimals, we get the new decimals as 9.756 and 6.280.

Let us now subtract them.

9.756
− 6.280
= 3.476

ii) On converting the given decimals to like decimals, we get the new decimals as 48.10 and 00.37.

Let us now subtract them.

48.10

− 00.37
= 47.73

iii) On converting the given decimals to like decimals, we get the new decimals as 108.032 and 086.800.

Let us now subtract them.

108.032
− 086.800
= 21.232

iv) On converting the given decimals to like decimals, we get the new decimals as 100.00 and 026.32.

Let us now subtract them.

100.00
− 026.32
= 73.68

Question:6
Take out 3.547 from 7.2
Solution:
According to the question, we need to subtract 3.547 from 7.2.

On converting the given decimals to like decimals, we get the new decimals as 3.547 and 7.200.

Let us now subtract them.

7.200
− 3.547
= 3.653

Question:7
What is to be added to 36.85 to get 59.41?
Solution:
Let x be added to 36.85 to get 59.41.

$\therefore 36.85 + x = 59.41$

or, $x = 59.41 - 36.85$
$= 22.56$

Thus, we need to add 22.56 to 36.85 to get 59.41.

Question:8
What is to be subtracted from 17.1 to get 2.051?
Solution:
Let x be subtracted from 17.1 to get 2.051.

$\therefore 17.1 - x = 2.051$

or, $x = 17.1 - 2.051$
$= 15.049$

Thus, we need to subtract 15.049 from 17.1 to get 2.051.

Question:9
By how much should 34.79 be increased to get 70.15?
Solution:
Let 34.79 be increased by x to get 70.15.

$\therefore$ 34.79 + x = 70.15

or, x = 70.15 $-$ 34.79
= 35.36

Thus, 34.79 should be increased by 35.36 to get 70.15.

Question:10
By how much should 59.71 be decreased to get 34.58?
Solution:
Let 59.71 be decreased by x to get 34.58.

$\therefore$ 59.71 $-$ x = 34.58

or, x = 59.71 $-$ 34.58
= 25.13

Thus, 59.71 should be decreased by 25.13 to get 34.58.

Question:11
Find the product:
i 4.74 × 10
ii 0.45 × 10
iii 0.0215 × 10
iv 0.0054 × 10
Solution:
i) On dividing by 100, we get:

4.74 $\times$10 = $\frac{474}{100} \times 10 = \frac{474}{10} = 47.4$

ii) On dividing by 100, we get:

$\frac{45}{100} \times 10 = \frac{45}{10} = 4.5$

iii) Because the decimal is after 4 places from the right, we will divide by 10,000. We get:

$\frac{215}{10000} \times 10 = \frac{215}{1000} = 0.215$

iv) Because the decimal is after 4 places from the right, we will divide by 10,000. We get:

$\frac{54}{10000} \times 10 = \frac{54}{1000} = 0.054$

Question:12
Find the product:
i 35.853 × 100
ii 42.5 × 100
iii 12.075 × 100
iv 100 × 0.005
Solution:

i) On dividing by 1,000, we get:

$\frac{35853}{1000} \times 100 = \frac{35853}{10} = 3585.3$

ii) On dividing by 10, we get:

$\frac{425}{10} \times 100 = 425 \times 10 = 4250$

iii) On dividing by 1,000, we get:

$\frac{12075}{1000} \times 100 = \frac{12075}{10} = 1207.5$

iv) On dividing by 1,000, we get:

$100 \times \frac{5}{1000} = \frac{5}{10} = 0.5$

Question:13

Find the product:

i 2.506 × 1000

ii 20.708 × 1000

iii 0.0529 × 1000

iv 1000 × 0.1

Solution:

i) On dividing by 1000, we get:

$\frac{2506}{1000} \times 1000 = 2506$

ii) On dividing by 1000, we get:

$\frac{20708}{1000} \times 1000 = 20708$

iii) On dividing by 10,000, we get:

$\frac{529}{10000} \times 1000 = \frac{529}{10} = 52.9$

iv) On dividing by 10, we get:

$1000 \times \frac{1}{10} = 100$

Question:14

Find the product:

i 3.4 × 17

ii 0.745 × 12

iii 28.73 × 47

iv 0.0415 × 59

Solution:

i) On dividing the decimal by 10 and multiplying the numbers, we get:

$\frac{34}{10} \times 17 = \frac{578}{10} = 57.8$

ii) On dividing the decimal by 1000 and multiplying the numbers, we get:

$\frac{745}{1000} \times 12 = \frac{8940}{1000} = 8.94$

iii) On dividing the decimal by 100 and multiplying the numbers, we get:

$\frac{2873}{100} \times 47 = \frac{135031}{100} = 1350.31$

iv) On dividing the decimal by 10000 and multiplying the numbers, we get:

$\frac{415}{10000} \times 59 = \frac{24485}{10000} = 2.4485$

Question:15

Find:

i 1.07 × 0.02

ii 211.9 × 1.13

iii 10.05 × 1.05

iv 13.01 × 5.01

Solution:

i)

$\frac{107}{100} \times \frac{2}{100} = \frac{107 \times 2}{10000}$

= 0.0214

ii)
$\frac{2119}{10} \times \frac{113}{100} = \frac{239447}{1000} = 239.447$

iii)
$\frac{1005}{100} \times \frac{105}{100} = \frac{105525}{10000} = 10.5525$

iv)

$\frac{1301}{100} \times \frac{501}{100} = \frac{651801}{10000} = 65.1801$

Question:16
Find the area of a rectangle whose length is 5.5 m and breadth is 3.4 m.
Solution:
Length of the rectangle = 5.5 m

Breadth of the rectangle = 3.4 m

We know:

Area of rectangle = Length $\times$ Breadth
$= 5.5 \times 3.4 = \frac{55}{10} \times \frac{34}{10} = \frac{1870}{100} = 18.7\ meter\ square$

Thus, area of the rectangle = 18.7 m^2

Question:17
If the cost of a book is Rs 25.75, find the cost of 24 such books.
Solution:
Cost of one book = Rs. 25.75

$\therefore$ Cost of 24 books = Rs. 25.75 $\times$ 24
= $\frac{2575}{100} \times 24$
= $\frac{103}{4} \times 24 = 103 \times 6 = 618$

Hence, the cost of 24 books is Rs. 618.

Question:18
A car covers a distance of 14.75 km in one litre of petrol. How much distance will it cover in 15.5 litres of petrol?
Solution:
Distance travelled by the car in 1 litre of petrol = 14.75 km

$\therefore$ Distance travelled by the car in 15.5 litres of petrol = 14.75×15.5

= $\frac{1475}{100} \times \frac{155}{10}$
= $\frac{228625}{1000}$
= 228.625 km

Thus, the car travelled 228.625 km in 15.5 litres of petrol.

Question:19
One kg of rice costs Rs 42.65. What will be the cost of 18.25 kg of rice?
Solution:
Price of 1 kg of rice = Rs. 42.65

Price of 18.25 kg of rice = Rs. 42.65 $\times$ 18.25
= $\frac{4265}{100} \times \frac{1825}{100} = \frac{7783625}{10000}$

= 778.3625

Thus, 18.25 kg of rice will cost Rs. 778.36.

Question:20

One metre of cloth costs Rs 152.50. What is the cost of 10.75 metres of cloth?

Solution:

Cost of 1 m of cloth = Rs. 152.50

∴ Cost of 10.75 m of cloth = Rs. 152.50 $\times$ 10.75

$\frac{1525}{10} \times \frac{1075}{100} = \frac{1639375}{1000}$
= 1639.375

Thus, 10.75 m of cloth will cost Rs. 1639.375.

Question:21

Divide:

i 142.45 by 10

ii 54.25 by 10

iii 3.45 by 10

iv 0.57 by 10

v 0.043 by 10

vi 0.004 by 10

Solution:

i

$\frac{142.45}{10} = \frac{14245}{100 \times 10} = \frac{14245}{1000} = 14.245$

ii

$\frac{54.25}{10} = \frac{5425}{100 \times 10} = \frac{5425}{1000} = 5.425$

iii

$\frac{3.45}{10} = \frac{345}{100 \times 10} = \frac{345}{1000} = 0.345$

iv

$\frac{0.57}{10} = \frac{57}{1000} = 0.057$

v

$\frac{0.043}{10} = \frac{43}{10 \times 1000} = 0.0043$

vi

$\frac{0.004}{10} = \frac{4}{10 \times 1000} = 0.0004$

Question:22

Divide:

i 459.5 by 100

ii 74.3 by 100

iii 5.8 by 100

iv 0.7 by 100

v 0.48 by 100

vi 0.03 by 100

Solution:

i $\frac{459.5}{100} = \frac{4595}{1000} = 4.595$

ii $\frac{74.3}{100} = \frac{743}{1000} = 0.743$

iii $\frac{5.8}{100} = \frac{58}{1000} = 0.058$

iv $\frac{0.7}{100} = \frac{7}{1000} = 0.007$

v $\frac{0.48}{100} = \frac{48}{100\times100} = 0.0048$

vi $\frac{0.03}{100} = \frac{3}{100\times100} = 0.0003$

Question:23

Divide:

i 235.41 by 1000

ii 29.5 by 1000

iii 3.8 by 1000

iv 0.7 by 1000

Solution:

i $\frac{235.41}{1000} = \frac{23541}{1000\times100} = 0.23451$

ii $\frac{29.5}{1000} = \frac{295}{1000\times10} = 0.0295$

iii $\frac{3.8}{1000} = \frac{38}{1000\times10} = 0.0038$

iv $\frac{0.7}{1000} = \frac{7}{1000\times10} = 0.0007$

Question:24

Divide:

i 0.45 by 9

ii 217.44 by 18

iii 319.2 by 2.28

iv 40.32 by 9.6

v 0.765 by 0.9

vi 0.768 by 1.6

Solution:

i

$\frac{0.45}{9} = \frac{45}{9\times100} = \frac{5}{100} = 0.05$

ii

$\frac{217.44}{18} = \frac{21744}{18\times100} = 12.08$

iii

$\frac{319.2}{2.28} = \frac{3192\times100}{228\times10} = 140$

iv

$\frac{40.32}{9.6} = \frac{4032\times10}{96\times100} = 4.2$

v

$\frac{0.765}{0.9} = \frac{765\times10}{9\times1000} = \frac{7650}{9000} = 0.85$

vi

$\frac{0.768}{1.6} = \frac{768\times10}{16\times1000} = \frac{7680}{16000} = 0.48$

Question:25

Divide:

i 16.64 by 20

ii 0.192 by 12

iii 163.44 by 24

iv 403.2 by 96

v 16.344 by 12

vi 31.92 by 228

Solution:

i

$\frac{16.64}{20} = \frac{1664}{20\times100} = 0.832$

ii

$\frac{0.192}{12} = \frac{192}{12\times1000} = 0.016$

iii

$\frac{163.44}{24} = \frac{16344}{24 \times 100} = 6.81$

iv

$\frac{403.2}{96} = \frac{4032}{960} = 4.2$

v

$\frac{16.344}{12} = \frac{16344}{12 \times 1000} = \frac{1362}{1000} = 1.362$

vi

$\frac{31.92}{228} = \frac{3192}{228 \times 100} = \frac{14}{100} = 0.14$

Question:26

Divide:

i 15.68 by 20

ii 164.6 by 200

iii 403.80 by 30

Solution:

i

$\frac{15.68}{20}$

$= \frac{1568}{20 \times 100} = 0.784$

ii

$\frac{164.6}{200}$

$\frac{1646}{200 \times 10} = \frac{1646}{2000} = 0.823$

iii

$\frac{403.8}{30}$

$= \frac{4038}{30 \times 10} = \frac{4038}{300} = 13.46$

Question:27

Q

Solution:

Ans

Question:28

Divide:

i 76 by 0.019

ii 88 by 0.08

iii 148 by 0.074

iv 7 by 0.014

Solution:

i

$\frac{76}{0.019} = \frac{76 \times 1000}{19} = 4000$

ii

$\frac{88}{0.08} = \frac{88 \times 100}{8} = 1100$

iii

$\frac{148}{0.074} = \frac{148 \times 1000}{74} = 2000$

iv

$\frac{7}{0.014} = \frac{7 \times 1000}{14} = 500$

Question:29

Divide:

i 20 by 50

ii 8 by 100

iii 72 by 576

iv 144 by 15

Solution:

i

$\frac{20}{50} = \frac{2}{5} = 0.4$

ii

$\frac{8}{100} = 0.08$

iii

$\frac{72}{576} = \frac{18}{144} = \frac{3}{24} = 0.125$

iv

$\frac{144}{15} = \frac{48}{5} = 9.6$

Question:30

A vehicle covers a distance of 43.2 km in 2.4 litres of petrol. How much distance will it travel in 1 litre of petrol?

Solution:

Distance travelled by the vehicle in 2.4 litres of petrol = 43.2 km

∴ Distance travelled in 1 litre of petrol will be:

$\frac{43.2}{2.4} = \frac{432}{24} = 18$

Thus, the vehicle will travel 18 km in 1 litre of petrol.

Question:31

The total weight of some bags of wheat is 1743 kg. If each bag weights 49.8 kg, how many bags are there?

Solution:

Let the number of bags of wheat be *x*.

Given:

Weight of *x* bags = 1,743 kg

Weight of one bag = 49.8 kg

Therefore, 49.8 $\times$ *x* = 1,743

x = $\frac{1743}{49.8} = \frac{1743 \times 10}{498}$

= 35

Thus, there are 35 bags of wheat.

Question:32

Shikha cuts 50 m of cloth into pieces of 1.25 m each. How many pieces does she get?

Solution:

Length of cloth = 50 m

Length of one piece of cloth = 1.25 m

Let the number of pieces be *x*.

∴ Number of pieces of cloth $\times$ Length of each piece of cloth = Total length of cloth

$x \times 1.25 = 50$
$x = \frac{50}{1.25}$
$= \frac{50 \times 100}{125} = 40$

Thus, she gets 40 pieces of 1.25 m cloth from a total of 50 m.

Question:33
Each side of a rectangular polygon is 2.5 cm in length. The perimeter of the polygon is 12.5 cm. How many sides does the polygon have?
Solution:
Length of each side of the polygon = 2.5 cm

Perimeter of the polygon = 12.5 cm

Let the number of sides of the polygon be *z*.

$\therefore 2.5 \times z = 12.5$ $Perimeter = Length of one side multiplied by the number of sides$
or, $z = \frac{12.5}{2.5} = 5$

Thus, the polygon has 5 sides.

Question:34
The product of two decimals is 42.987. If one of them is 12.46, find the other.
Solution:
One decimal is 12.46.

Let the other decimal be *x*.

According to the question:

$12.46 \times x = 42.987$
$x = \frac{42.987}{12.46} = \frac{42987 \times 100}{1246 \times 1000} = \frac{42987}{12460} = 3.45$

Thus, the other decimal is 3.45.

Question:35
The weight of 34 bags of sugar is 3483.3 kg. If all bags weigh equally, find the weight of each bag.
Solution:
Number of bags = 34

Weight of 34 bags = 3483.3 kg

$\therefore$ Weight of one bag = $\frac{\text{Weight of 34 bags}}{\text{Number of bags}}$
$\frac{3483.3}{34} = \frac{34833}{340} = 102.45$

Thus, weight of each bag = 102.45 kg

Question:36
How many buckets of equal capacity can be filled from 586.5 litres of water, if each bucket has capacity of 8.5 litres?
Solution:
Capacity of one bucket = 8.5 litres

Total water in all buckets = 586.5 litres

Let the number of buckets with equal capacity be *x*.

According to the question:

$8.5 \times x = 586.5$

$x = \frac{586.5}{8.5} = \frac{5865}{85} = 69$

Thus, there are 69 buckets.

Question:37

Mark the correct alternative in each of the following:

When 0.48 is written in the simplest form of its terms, the sum of its numerator and denominator is

a 148 b 74 c 37 d 147

Solution:

$0.48 = \frac{48}{100} = \frac{48 \div 4}{100 \div 4} \quad (\text{HCF of } 48 \text{ and } 100 = 4) = \frac{12}{25}$

Here,

Numerator = 12

Denominator = 25

∴ Sum of the numerator and denominator = 12 + 25 = 37

Hence, the correct answer is option c.

Question:38

Mark the correct alternative in each of the following:

The improper fraction $2\frac{1}{25}$ in decimal form is

a 2.4 b 2.04 c 2.004 d None of these

Solution:

The given fraction is $2\frac{1}{25}$. Now,
$2\frac{1}{25} = 2 + \frac{1}{25} = 2 + \frac{1 \times 4}{25 \times 4} = 2 + \frac{4}{100} = 2 + 0.04 = 2.04$

Hence, the correct answer is option b.

Question:39

Mark the correct alternative in each of the following:

4 + 4.4 + 44.4 + 4.04 + 444 =

a 500.88 b 577.2 c 495.22 d 472.88

Solution:

Converting the decimals to like decimals, we have 4.00, 4.40, 44.40, 4.04 and 444.00.

Now,

```
    4 . 0 0
    4 . 4 0
 4 4 . 4 0
    4 . 0 4
+ 4 4 4 . 0 0
-------------
  5 0 0 . 8 4
```

∴ 4 + 4.4 + 44.4 + 4.04 + 444 = 500.84

Disclaimer: None of the options given in the question matches with the answer.

Question:40

Mark the correct alternative in each of the following:

1.04 as an improper fraction is

$a\ 1\frac{1}{5}$ $b\ 1\frac{2}{5}$ $c\ 1\frac{1}{25}$ $d\ 1\frac{2}{25}$

Solution:

The given decimal is 1.04.

$1.04 = 1 + 0.04 = 1 + \frac{4}{100} = 1 + \frac{4 \div 4}{100 \div 4} = 1 + \frac{1}{25} = 1\frac{1}{25}$

Hence, the correct answer is option c.

Question:41

Mark the correct alternative in each of the following:

If $24.125 = 24 + \frac{A}{10} + \frac{B}{100} + \frac{C}{1000}$, then $A + B + C$ is

$a\ 3$ $b\ 6$ $c\ 13$ $d\ 8$

Solution:

$24.125 = 24 + 0.125 = 24 + 0.1 + 0.02 + 0.005 = 24 + \frac{1}{10} + \frac{2}{100} + \frac{5}{1000}$

Comparing this with the given expression, we get

$A = 1$, $B = 2$ and $C = 5$

$\therefore A + B + C = 1 + 2 + 5 = 8$

Hence, the correct answer is option d.

Question:42

Mark the correct alternative in each of the following:

0.002 × 0.5 =

$a\ 0.0001$ $b\ 0.001$ $c\ 0.01$ $d\ 1$

Solution:

$0.002 \times 0.5 = \frac{2}{1000} \times \frac{5}{10} = \frac{2 \times 5}{1000 \times 10} = \frac{10}{10000} = \frac{1}{1000} = 0.001$

Hence, the correct answer is option b.

Question:43

Mark the correct alternative in each of the following:

3 × 0.3 × 0.03 × 0.003 × 30 =

$a\ 0.0000243$ $b\ 0.000243$ $c\ 0.00243$ $d\ 0.243$

Solution:

$3 \times 0.3 \times 0.03 \times 0.003 \times 30 = 3 \times \frac{3}{10} \times \frac{3}{100} \times \frac{3}{1000} \times 3 \times 10 = \frac{3 \times 3 \times 3 \times 3 \times 3}{100 \times 1000} = \frac{243}{100000} = 0.00243$ (Decimal point is shifted to left by 5 places)

Hence, the correct answer is option c.

Question:44

Mark the correct alternative in each of the following:

0.012 × 0.15 =

a 0.8 b 0.08 c 0.008 d 0.0018

Solution:

We have,

12 × 15 = 180

It can be seen that the sum of the decimals in the given decimals is 3 + 2 = 5.

So, the product must contain 5 places of decimals.

∴ 0.012 × 0.15 = 0.00180 = 0.0018

Hence, the correct answer is option d.

Question:45

Mark the correct alternative in each of the following:

75.57 ÷ 0.01 =

a 7557 b 0.7557 c 755.7 d 7.557

Solution:

$75.57 \div 0.01 = \frac{75.57}{0.01} = \frac{75.57 \times 100}{0.01 \times 100}$ (Multiply numerator and denominator by 100 to convert the divisor into whole number) $= \frac{7557}{1} = 7557$

Hence, the correct answer is option a.

Question:46

Mark the correct alternative in each of the following:

What should be subtracted from 0.1 to get 0.06?

a 0.4 b 0.04 c 0.004 d None of these

Solution:

The decimal which should be subtracted from 0.1 to get 0.06 can be obtained by subtracting 0.06 from 0.1.

Converting the given decimals into like decimals, we have 0.10 and 0.06.

Now,

$$\begin{array}{r} 0.10 \\ -\ 0.06 \\ \hline 0.04 \end{array}$$

∴ Required decimal = 0.1 – 0.06 = 0.04

Hence, the correct answer is option b.

Question:47

Mark the correct alternative in each of the following:

What should be added to 5.09 to get 5.5?

a 0.41 b 0.59 c 0.49 d 0.95

Solution:

The decimal number which should be added to 5.09 to get 5.5 is obtained by subtracting 5.09 from 5.5.

Converting the given decimals to like decimals, we have 5.09 and 5.50.

Now,

$$\begin{array}{r} 5.50 \\ -\ 5.09 \\ \hline 0.41 \end{array}$$

∴ Required decimal = 5.50 – 5.09 = 0.41

Thus, 0.41 must be added to 5.09 to get 5.5.

Hence, the correct answer is option a.

Question:48

Mark the correct alternative in each of the following:

0.3 × 0.3 × 0.3 =

a 2.7 b 0.27 c 0.027 d None of these

Solution:

We have,

3 × 3 × 3 = 27

The sum of the decimal places in the given decimals is 1 + 1 + 1 = 3.

So, the product must contain 3 places of decimals.

∴ 0.3 × 0.3 × 0.3 = 0.027

Hence, the correct answer is c.

Question:49

Mark the correct alternative in each of the following:

0.25 × 0.8 =

a 0.02 b 0.2 c 0.002 d 2

Solution:

In order to find the product, we first multiply 8 by 25.

We have, 25 × 8 = 200

Now, 0.25 has 2 decimal places and 0.8 has 1 decimal place.

The sum of the decimal places is 2 + 1 = 3.

So, the product must contain 3 places of decimals.

∴ 0.25 × 0.8 = 0.200 = 0.2

Hence, the correct answer is option b.

Question:50

Mark the correct alternative in each of the following:

5 kg 5 g written in decimal notation is

a 5.5 kg b 5.05 kg c 5.005 kg d 5.0005 kg

Disclaimer: The units are missing from the options given in the book.
Solution:

We know that,

1 g = $\frac{1}{1000}$ kg

Now,

5 kg 5 g = 5 kg + 5 g

= 5 kg + $\frac{5}{1000}$ kg

= 5 kg + 0.005 kg

= 5.005 kg

∴ 5 kg 5 g = 5.005 kg

Hence, the correct answer is option c.

Question:51
Mark the correct alternative in each of the following:

0.012 ÷ 1.5 = ?

a 0.8 b 0.08 c 0.008 d None of these
Solution:

$0.012 \div 1.5 = \frac{0.012}{1.5} = \frac{0.012 \times 10}{1.5 \times 10}$ (Multiply the numerator and denominator by 10 to convert the divisor into a whole number) $= \frac{0.12}{15}$

$$
\begin{array}{r}
0.008 \\
15\overline{)\,0.12} \\
-0 \\
\hline
1 \\
-0 \\
\hline
12 \\
-0 \\
\hline
120 \\
-120 \\
\hline
\times
\end{array}
$$

∴ 0.012 ÷ 1.5 = 0.008

Hence, the correct answer is option c.

Question:52
Mark the correct alternative in each of the following:

0.02 × 0.05 =

a 0.1 b 0.01 c 0.001 d 0.0001
Solution:
In order to find the product, we first multiply 2 by 5.

We have, 2 × 5 = 10

Now, 0.02 has 2 decimal places and 0.05 has 2 decimal places.

The sum of the decimal places is 2 + 2 = 4.

So, the product must contain 4 places of decimals.

$\therefore 0.02 \times 0.05 = 0.0010 = 0.001$

Hence, the correct answer is option c.

Question:53

Mark the correct alternative in each of the following:

5 km 5 m = ?

a 5.5 km b 5.05 km c 5.005 km d 5.0005 km

Solution:

We know that,

1 m = $\frac{1}{1000}$ km

Now,

5 km 5 m = 5 km + 5 m

= 5 km + $\frac{5}{1000}$ km

= 5 km + 0.005 km

= 5.005 km

$\therefore$ 5 km 5 m = 5.005 km

Hence, the correct answer is option c.

Question:54

Mark the correct alternative in each of the following:

The value of 2.2 × 0.2 × 0.001 is

a 4.2 b 0.00044 c 4.4 d None of these

Solution:

In order to find the product, we first multiply 22 by 2.

We have, 22 × 2 = 44

Now, 2.2 has 1 decimal place, 0.2 has 1 decimal place and 0.001 has 3 decimal places.

The sum of the decimal places is 1 + 1 + 3 = 5.

So, the product must contain 5 places of decimals.

$\therefore$ 2.2 × 0.2 × 0.001 = 0.00044

Thus, the value of 2.2 × 0.2 × 0.001 is 0.00044.

Hence, the correct answer is option b.

Question:55

Mark the correct alternative in each of the following:

If 14 × 4 = 56, then 0.014 × 4 =

a 0.56 b 5.6 c 0.056 d None of these

Solution:

It is given that,

14 × 4 = 56

Now, 0.014 has 3 decimal places.

So, the required product must contain 3 places of decimals.

∴ 0.014 × 4 = 0.056

Hence, the correct answer is option c.

Question:56

Mark the correct alternative in each of the following:

8 ml is equal to

a 0.8 l b 0.08 l c 0.008 l d None of these

Solution:

We know that,

1 mL = $\frac{1}{1000}$ L

∴ 8 mL = $\frac{8}{1000}$ L = 0.008 L

Hence, the correct answer is option c.