Question:1

Convert each of the following into a fraction in its simplest form:

i .8

ii .75

iii .06

iv .285

Solution:

We have:

$i\, 0.8 = \frac{8}{10} = \frac{8 \div 2}{10 \div 2} = \frac{4}{5}$

$ii\, 0.75 = \frac{75}{100} \;\; = \;\; \frac{75 \div 25}{100 \div 25} = \frac{3}{4}$

$iii\, 0.06 = \frac{6}{100} = \frac{6 \div 2}{100 \div 2} = \frac{3}{50}$

$iv\, 0.285 = \frac{285}{1000} = \frac{285 \div 5}{1000 \div 5} = \frac{57}{200}$

Question:2

Convert each of the following as a mixed fraction:

i 5.6

ii 12.25

iii 6.004

iv 4.625

Solution:

We have:

$i\, 5.6 = \frac{56}{10} = \frac{56 \div 2}{10 \div 2} = \frac{28}{5} = 5\,\frac{3}{5}$

$ii\, 12.25 = \frac{1225}{100} = \frac{1225 \div 25}{100 \div 25} = \frac{49}{4} = 12\,\frac{1}{4}$

$iii\, 6.004 = \frac{6004}{1000} = \frac{6004 \div 4}{1000 \div 4} = \frac{1501}{250} = 6\,\frac{1}{250}$

$iv\, 4.625 = \frac{4625}{1000} = \frac{4625 \div 125}{1000 \div 125} = \frac{37}{8} = 4\,\frac{5}{8}$

Question:3

Convert each of the following into like decimals:

$i\ \frac{47}{10}$
$ii\ \frac{156}{100}$
$iii\ \frac{2516}{100}$
$iv\ \frac{3524}{1000}$
$v\ \frac{25}{8}$
$vi\ 3\ \frac{2}{5}$
$vii\ 2\ \frac{2}{25}$
$viii\ \frac{17}{20}$

Solution:

$i\ \frac{47}{10}$

On dividing, we get:

$$\begin{array}{r} 10\overline{)\ 47\ (4.7} \\ -40 \\ \hline 70 \\ -70 \\ \hline \times \end{array}$$

$\therefore \frac{47}{10} = 4.7$

$ii\ \frac{156}{100}$

On dividing, we get:

$$\begin{array}{r} 100\overline{)\ 156\ (1.56} \\ -100 \\ \hline 560 \\ -500 \\ \hline 600 \\ -600 \\ \hline \times \end{array}$$

$\therefore \frac{156}{100} = 1.56$

$iii\ \frac{2516}{100}$

On dividing, we get:

$$
\begin{array}{r}
100\overline{)2516(}25.16 \\
-200 \\
\hline
516 \\
-500 \\
\hline
160 \\
-100 \\
\hline
600 \\
-600 \\
\hline
\times
\end{array}
$$

$\therefore \frac{2516}{100} = 25.16$

$iv\ \frac{3524}{1000}$

On dividing, we get:

$$
\begin{array}{r}
1000\overline{)3524(}3.524 \\
-3000 \\
\hline
5240 \\
-5000 \\
\hline
2400 \\
-2000 \\
\hline
4000 \\
-4000 \\
\hline
\times
\end{array}
$$

$\therefore \frac{3524}{1000} = 3.524$

$v\ \frac{25}{8}$

On dividing, we get:

$$
\begin{array}{r}
8\overline{)25(}3.125 \\
-24 \\
\hline
10 \\
-8 \\
\hline
20 \\
-16 \\
\hline
40 \\
-40 \\
\hline
\times
\end{array}
$$

$\therefore \frac{25}{8} = 3.125$

$vi\ 3\frac{2}{5} = \frac{17}{5}$

On dividing, we get:

$$\begin{array}{r} 5\overline{)\,17\,(3.4} \\ -15 \\ \hline 20 \\ -20 \\ \hline \times \end{array}$$

$\therefore \frac{17}{5} = 3.4$

$vii\ 2\frac{2}{25} = \frac{52}{25}$

On dividing, we get:

$$\begin{array}{r} 25\overline{)\,52\,(2.08} \\ -50 \\ \hline 200 \\ -200 \\ \hline \times \end{array}$$

$\therefore \frac{52}{25} = 2.08$

$viii\ \frac{17}{20}$

On dividing, we get:

$$\begin{array}{r} 20\overline{)\,170\,(0.85} \\ -160 \\ \hline 100 \\ -100 \\ \hline \times \end{array}$$

$\therefore \frac{17}{20} = 0.85$

Question:4

Convert each of the following into like decimals:

i 6.5, 16.03, 0.274, 119.4

ii 3.5, 0.67, 15.6, 4

Solution:

Converting the given decimals into like decimals, we have:

i 6.500, 16.030, 0.274 and 119.400

ii 3.50, 0.67, 15.60 and 4.00

Question:5

Fill in each of the place holders with the correct symbol > or <.

i 78.23 ▭ 69.85
ii 3.406 ▭ 3.46
iii 5.68 ▭ 5.86
iv 14.05 ▭ 14.005
v 1.85 ▭ 1.805
vi 0.98 ▭ 1.07

Solution:

We have,

i Comparing the whole number part, 78 > 69.
Thus, 78.23 > 69.85

ii Converting the decimals into like decimals, we get 3.406 and 3.460.
Comparing the whole number parts, 3 = 3
Comparing the tenths digit, 4 = 4
Comparing the hundredths digit, 6 > 0
Thus, 3.406 < 3.46

iii Comparing the whole number parts, 5 = 5
Comparing the tenths digit, 6 < 8
Thus, 5.68 < 5.86

iv Converting the decimals into like decimals, we get 14.050 and 14.005.
Comparing the whole number parts, 14 = 14
Comparing the tenths digit, 0 = 0
Comparing the hundredths digit, 5 > 0
Thus, 14.05 > 14.005

v Converting the decimals into like decimals, we get 1.850 and 1.805.
Comparing the whole number parts, 1 = 1
Comparing the tenths digit, 8 = 8
Comparing the hundredths digit, 5 > 0
Thus, 1.85 > 1.805

vi Comparing the whole number parts, 0 < 1
Thus, 0.98 < 1.07

Question:6

Arrange the following decimals in ascending order:

i 4.6, 7.4, 4.58, 7.32, 4.06
ii 0.5, 5.5, 5.05, 0.05, 5.55
iii 6.84, 6.48, 6.8, 6.4, 6.08
iv 2.2, 2.202, 2.02, 22.2, 2.002

Solution:

i Converting the given decimals into like decimals, we get:
4.60, 7.40, 4.58, 7.32, 4.06
Clearly, 4.06 < 4.58 < 4.60 < 7.32 < 7.40
Hence, the given decimals in ascending order are 4.06, 4.58, 4.6, 7.32 and 7.4.

ii Converting the given decimals into like decimals, we get:
0.50, 5.50, 5.05, 0.05, 5.55
Clearly, 0.05 < 0.50 < 5.05< 5.50 < 5.55
Hence, the given decimals in ascending order are 0.05, 0.5, 5.05, 5.5 and 5.55.

iii Converting the given decimals into like decimals, we get:
6.84, 6.48, 6.80, 6.40, 6.08
Clearly, 6.08 < 6.40 < 6.48 < 6.80< 6.84
Hence, the given decimals in ascending order are 6.08, 6.4, 6.48, 6.8 and 6.84.

iv Converting the given decimals into like decimals, we get:
2.200, 2.202, 2.020, 22.200, 2.002
Clearly, 2.002 < 2.020 < 2.200 < 2.202 < 22.200
Hence, the given decimals in ascending order are 2.002, 2.02, 2.2, 2.202 and 22.2.

Question:7

Arrange the following decimals in descending order:

i 7.4, 8.34, 74.4, 7.44, 0.74
ii 2.6, 2.26, 2.06, 2.007, 2.3

Solution:

i Converting the given decimals into like decimals, we get:
7.40, 8.34, 74.40, 7.44, 0.74
Clearly, 74.40 > 8.34 > 7.44 > 7.40 > 0.74
Hence, the given decimals in descending order are 74.4, 8.34, 7.44, 7.4 and 0.74.

ii Converting the given decimals into like decimals, we get:

2.600, 2.260, 2.060, 2.007, 2.300

Clearly, 2.600 > 2.300 > 2.260 > 2.060 > 2.007

Hence, the given decimals in descending order are 2.6, 2.3, 2.26, 2.06 and 2.007.

Question:8

Express 45 mm in cm, m and km.

Solution:

45 mm = $\frac{45}{10}$ cm = 4.5 cm

= 4.5 cm = $\frac{4.5}{100}\ \mathrm{m}$ = 0.045 m

= 0.045 m = $\frac{0.045}{1000}\ \mathrm{km}$ = 0.000045 km

$\therefore$ 45 mm = 4.5 cm = 0.045 m = 0.000045 km

Question:9

Express as rupees using decimals:

i 8 paise

ii 9 rupees 75 paise

iii 8 rupees 5 paise

Solution:

We have:

i 8 paise = Rs $\frac{8}{100}$ = Rs 0.08

ii 9 rupees 75 paise = Rs $\left(9+\frac{75}{100}\right) = \mathrm{Rs}\ \left(9\ +\ 0.75\right)$ = Rs 9.75

iii 8 rupees 5 paise $= \mathrm{Rs}\ \left(8+\ \frac{5}{100}\right) = \mathrm{Rs}\ \left(8\ +\ 0.05\right)$ = Rs 8.05

Question:10

Express in km using decimals:

i 65 m

ii 284 m

iii 3 km 5 m

Solution:

We have:

i 65 m = $\frac{65}{1000}$ km = 0.065 km

$\therefore$ 65 m = 0.065 km

ii 284 m = $\frac{284}{1000}$km = 0.284 km

iii 3 km 5 m = $\left(3+\ \frac{5}{1000}\right)\ =\ (3+\ 0.005)\ =\ 3.005\ \mathrm{km}$

Question:11

Add:

16, 8.7, 0.94, 6.8 and 7.77

Solution:

Converting the given decimals into like decimals, we get:

16.00, 8.70, 0.94, 6.80 and 7.77

Writing these decimals in column form and adding, we get:

$$\begin{array}{r} 16.00 \\ 8.70 \\ 0.94 \\ 6.80 \\ 7.77 \\ \hline 40.21 \end{array}$$

Hence, the sum of the given decimals is 40.21

Question:12

Add:

18.6, 206.37, 8.008, 26.4 and 6.9

Solution:

Converting the given decimals into like decimals, we get:

18.600, 206.370, 8.008, 26.400 and 6.900

Writing these decimals in column form and adding, we get:

$$\begin{array}{r} 18.600 \\ 206.370 \\ 8.008 \\ 26.400 \\ 6.900 \\ \hline 266.278 \end{array}$$

Hence, the sum of the given decimals is 266.278.

Question:13

Add:

63.5, 9.7, 0.8, 26.66 and 12.17

Solution:

Converting the given decimals into like decimals, we get:

63.50, 9.70, 0.80, 26.66 and 12.17

Writing these decimals in column form and adding, we get:

$$\begin{array}{r} 63.50 \\ 9.70 \\ 0.80 \\ 26.66 \\ 12.17 \\ \hline 112.83 \end{array}$$

Hence, the sum of the given decimals is 112.83.

Question:14

Add:

17.4, 86.39, 9.435, 8.8 and 0.06

Solution:

Converting the given decimals into like decimals, we get:

17.400, 86.390, 9.435, 8.800 and 0.060

Writing these decimals in column form and adding, we get:

$$\begin{array}{r} 17.400 \\ 86.390 \\ 9.435 \\ 8.800 \\ 0.060 \\ \hline 122.085 \end{array}$$

Hence, the sum of the given decimals is 122.085.

Question:15

26.9, 19.74, 231.769 and 0.048

Solution:

Converting the given decimals into like decimals, we get:

26.900, 19.740, 231.769 and 0.048

Writing these decimals in column form and adding, we get:

$$\begin{array}{r} 26.900 \\ 19.740 \\ 231.769 \\ 0.048 \\ \hline 278.457 \end{array}$$

Hence, the sum of the given decimals is 278.457.

Question:16

Add:

23.8, 8.94, 0.078 and 214.6

Solution:

Converting the given decimals into like decimals, we get:

23.800, 8.940, 0.078 and 214.600

Writing these decimals in column form and adding, we get:

$$\begin{array}{r} 23.800 \\ 8.940 \\ 0.078 \\ 214.600 \\ \hline 247.418 \end{array}$$

Hence, the sum of the given decimals is 247.418.

Question:17

Add:

6.606, 66.6, 666, 0.066, 0.66

Solution:

Converting the given decimals into like decimals, we get:

6.606, 66.600, 666.000, 0.066 and 0.660

Writing these decimals in column form and adding, we get:

$$\begin{array}{r} 6.606 \\ 66.600 \\ 666.000 \\ 0.066 \\ 0.660 \\ \hline 739.932 \end{array}$$

Hence, the sum of the given decimals is 739.932.

Question:18

Add:

9.09, 0.909, 99.9, 9.99, 0.099

Solution:

Converting the given decimals into like decimals, we get:

9.090, 0.909, 99.900, 9.990 and 0.099

Writing these decimals in column form and adding, we get:

$$\begin{array}{r} 9.090 \\ 0.909 \\ 99.900 \\ 9.990 \\ 0.099 \\ \hline 119.988 \end{array}$$

Hence, the sum of the given decimals is 119.988.

Question:19

Subtract:

14.79 from 72.43

Solution:

The given decimals are like decimals. Writing them in column form with the larger one at the top and subtracting them, we get:

$$\begin{array}{r} 72.43 \\ -14.79 \\ \hline 57.64 \end{array}$$

$\therefore 72.43 - 14.79 = 57.64$

Question:20

Subtract:

36.74 from 52.6

Solution:

Converting the given decimals into like decimals, we get:

36.74 and 52.60

Writing them in column form with the larger one at the top and subtracting them, we get:

$$\begin{array}{r} 52.60 \\ -36.74 \\ \hline 15.86 \end{array}$$

$\therefore 52.60 - 36.74 = 15.86$

Question:21

Subtract:

13.876 from 22

Solution:

Converting the given decimals into like decimals, we get:

13.876 and 22.000

Writing them in column form with the larger one at the top and subtracting them, we get:

$$\begin{array}{r} 22.000 \\ -13.876 \\ \hline 8.124 \end{array}$$

$\therefore 22.000 - 13.876 = 8.124$

Question:22

Subtract:

15.079 from 24.16

Solution:

Converting the given decimals into like decimals, we get:

15.079 and 24.160

Writing them in column form with the larger one at the top and subtracting them, we get:

$$\begin{array}{r} 24.160 \\ -15.079 \\ \hline 9.081 \end{array}$$

$\therefore 24.160 - 15.079 = 9.081$

Question:23

Subtract:

0.68 from 1.007

Solution:

Converting the given decimals into like decimals, we get:

0.680 and 1.007

Writing them in column form with the larger one at the top and subtracting them, we get:

$$\begin{array}{r} 1.007 \\ -0.680 \\ \hline 0.327 \end{array}$$

$\therefore 1.007 - 0.680 = 0.327$

Question:24

Subtract:

0.4678 from 5.05

Solution:

Converting the given decimals into like decimals, we get:

0.4678 and 5.0500

Writing them in column form with the larger one at the top and subtracting them, we get:

$$\begin{array}{r} 5.0500 \\ -0.4678 \\ \hline 4.5822 \end{array}$$

$\therefore 5.0500 - 0.4678 = 4.5822$

Question:25

Subtract:

2.5307 from 8

Solution:

Converting the given decimals into like decimals, we get:

2.5307 and 8.0000

Writing them in column form with the larger one at the top and subtracting them, we get:

$$\begin{array}{r} 8.0000 \\ -2.5307 \\ \hline 5.4693 \end{array}$$

$\therefore 8.0000 - 2.5307 = 5.4693$

Question:26

Subtract:

6.732 from 9.001

Solution:

Writing the given like decimals in column form with the larger one at the top and subtracting them, we get:

$$\begin{array}{r} 9.001 \\ -6.732 \\ \hline 2.269 \end{array}$$

$\therefore 9.001 - 6.732 = 2.269$

Question:27

Take out 5.746 from 9.1.

Solution:

Converting the given decimals into like decimals, we get:

5.746 and 9.100

Writing them in column form with the larger one at the top and subtracting them, we get:

$$\begin{array}{r} 9.100 \\ -5.746 \\ \hline 3.354 \end{array}$$

$\therefore 9.100 - 5.746 = 3.354$

Question:28

What is to be added to 63.58 to get 92?

Solution:

Converting the given decimals into like decimals, we get:

63.58 and 92.00

Thus, required number = $92.00 - 63.58 = 28.42$

Hence, 28.42 should be added to 63.58 to get 92.

Question:29

What is to be subtracted from 8.1 to get 0.813?

Solution:

Converting the given decimals into like decimals, we get:

8.100 and 0.813

Thus, required number = $8.100 - 0.813 = 7.287$

Hence, 7.287 should be subtracted from 8.1 to get 0.813.

Question:30

By how much should 32.67 be increased to get 60.1?

Solution:

Converting the given decimals into like decimals, we get:

32.67 and 60.10

Thus, required number = $60.10 - 32.67 = 27.43$

Hence, 32.67 should be increased by 27.43 to get 60.1.

Question:31

By how much should 74.3 be decreased to get 26.87?

Solution:

Converting the given decimals into like decimals, we get:

74.30 and 26.87

Thus, required number = $74.30 - 26.87 = 47.43$

Hence, 74.3 should be decreased by 47.43 to get 26.87.

Question:32

Rohit purchased a notebook for Rs 23.75, a pencil for Rs 2.85 and a pen for Rs 15.90. He gave a 50-rupee note to the shopkeeper. What amount did he get back?

Solution:

Total amount spent by Rohit on purchasing of the given articles = Rs $23.75 + 2.85 + 15.90$

= Rs 42.50

Money given to the shopkeeper = Rs 50

$\therefore$ Money returned by the shopkeeper = Rs $50 - 42.50$

= Rs 7.50

Thus, amount received by Rohit = Rs 7.50

Question:33

Find the product:

i 73.92 × 10

ii 7.54 × 10

iii 84.003 × 10

iv 0.83 × 10

v 0.7 × 10

vi 0.032 × 10

Solution:

We have the following:

i 73.92 × 10 = 739.2

$Shiftingthedecimalpointtotherightby1place$

ii 7.54 × 10 = 75.4

$Shiftingthedecimalpointtotherightby1place$

iii 84.003 × 10 = 840.03

$Shiftingthedecimalpointtotherightby1place$

iv 0.83 × 10 = 8.3

$Shiftingthedecimalpointtotherightby1place$

v 0.7 × 10 = 7

$Shiftingthedecimalpointtotherightby1place$

vi 0.032 × 10 = 0.32

$Shiftingthedecimalpointtotherightby1place$

Question:34

Find the product:

i 2.397 × 100
ii 6.83 × 100
iii 2.9 × 100
iv 0.08 ×100
v 0.6 × 100
vi 0.003 × 100

Solution:

We have the following:

i 2.397 × 100 = 239.7

$Shiftingthedecimalpointtotherightby2places$

ii 6.83 × 100 = 683

$Shiftingthedecimalpointtotherightby2places$

iii 2.9 × 100 = 290

$Shiftingthedecimalpointtotherightby2places$

iv 0.08 ×100 = 8

$Shiftingthedecimalpointtotherightby2places$

v 0.6 × 100 = 60

$Shiftingthedecimalpointtotherightby2places$

vi 0.003 × 100 = 0.3

$Shiftingthedecimalpointtotherightby2places$

Question:35

Find the product:

i 6.7314 × 1000
ii 0.182 × 1000
iii 0.076 × 1000
iv 6.25 × 1000
v 4.8 × 1000
vi 0.06 × 1000

Solution:

We have:

i 6.7314 × 1000 = 6731.4

$Shiftingthedecimalpointtotherightby3places$

ii 0.182 × 1000 = 182

$Shiftingthedecimalpointtotherightby3places$

iii 0.076 × 1000 = 76

$Shiftingthedecimalpointtotherightby3places$

iv 6.25 × 1000 = 6250

$Shiftingdecimalpointtotherightby3places$

v 4.8 × 1000 = 4800

$Shiftingthedecimalpointtotherightby3places$

vi 0.06 × 1000 = 60

$Shiftingthedecimalpointtotherightby3places$

Question:36

Find the product:

i 5.4 × 16

ii 3.65 × 19

iii 0.854 × 12

iv 36.73 × 48

v 4.125 × 86

vi 104.06 × 75

vii 6.032 × 124

$viii$ 0.0146 × 69

ix 0.00125 × 327

Solution:

We have the following:

i $54 \times 16 = 864$

$\therefore 5.4 \times 16 = 86.4$

$1 place of decimal$

ii $365 \times 19 = 6935$

$\therefore 3.65 \times 19 = 69.35$

$2 places of decimal$

iii $854 \times 12 = 10248$

$\therefore 0.854 \times 12 = 10.248$

$3 places of decimal$

iv $3673 \times 48 = 176304$

$\therefore 36.78 \times 48 = 1763.04$

$2 places of decimal$

v $4125 \times 86 = 354750$

$\therefore 4.125 \times 86 = 354.750$

$3 places of decimal$

$= 354.75$

vi $10406 \times 75 = 780450$

$\therefore 104.06 \times 75 = 7804.50$

$2 places of decimal$

$= 7804.5$

vii $6032 \times 124 = 747968$

$\therefore 6.032 \times 124 = 747.968$

$3 places of decimal$

$viii$ $146 \times 69 = 10074$

$\therefore 0.0146 \times 69 = 1.0074$

$4 places of decimal$

ix $125 \times 327 = 40875$

$\therefore 0.00125 \times 327 = 0.40875$

$5 places of decimal$

Question:37

Find the product

i 7.6 × 2.4

ii 3.45 × 6.3

iii 0.54 × 0.27

iv 0.568 × 4.9

v 6.54 × 0.09

vi 3.87 × 1.25

vii 0.06 × 0.38

$viii$ 0.623 × 0.75

ix 0.014 × 0.46

x 54.5 × 1.76

xi 0.045 × 2.4

xii 1.245 × 6.4

Solution:

i First, we will multiply 76 by 24.

$$\begin{array}{r} 76 \\ \times 24 \\ \hline 304 \\ 152\times \\ \hline 1824 \end{array}$$

$\therefore 76 \times 24 = 1824$

Sum of decimal places in the given numbers = $1 + 1 = 2$

$\therefore 7.6 \times 2.4 = 18.24$

$$2 places of decimal$$

ii First, we will multiply 345 by 63.

$$\begin{array}{r} 345 \\ \times 63 \\ \hline 1035 \\ 2070\times \\ \hline 21735 \end{array}$$

$\therefore 345 \times 63 = 21735$

Sum of decimal places in the given numbers = $2 + 1 = 3$

$\therefore 3.45 \times 6.3 = 21.735$

$$3 places of decimal$$

iii First, we will multiply 54 by 27.

$$\begin{array}{r} 54 \\ \times 27 \\ \hline 378 \\ 108\times \\ \hline 1458 \end{array}$$

$\therefore 54 \times 27 = 1458$

Sum of decimal places in the given numbers = $2 + 2 = 4$

$\therefore 0.54 \times 0.27 = 0.1458$

$4 places of decimal$

iv First, we will multiply 568 by 49.

$$\begin{array}{r} 568 \\ \times 49 \\ \hline 5112 \\ 2072\times \\ \hline 27832 \end{array}$$

$\therefore$ 568 $\times$ 49 = 27832

Sum of decimal places in the given numbers = $3 + 1$ = 4

$\therefore$ 0.568 $\times$ 4.9 = 2.7832

$4 places of decimal$

v First, we multiply 654 by 9.

$$\begin{array}{r} 654 \\ \times 9 \\ \hline 5886 \end{array}$$

$\therefore$ 654 $\times$ 9 = 5886

Sum of decimal places in the given numbers = $2 + 2$ = 4

$\therefore$ 6.54 $\times$ 0.09 = 0.5886

$4 places of decimal$

vi First, we will multiply 387 by 125.

$$\begin{array}{r} 387 \\ \times 125 \\ \hline 1935 \\ 774\times \\ 387\times\times \\ \hline 48375 \end{array}$$

$\therefore$ 387 $\times$ 125 = 48375

Sum of decimal places in the given numbers = $2 + 2$ = 4

$\therefore$ 3.87 $\times$ 1.25 = 4.8375

$4 places of decimal$

vii First, we will multiply 38 by 6.

$$\begin{array}{r} 38 \\ \times 6 \\ \hline 228 \end{array}$$

$\therefore 38 \times 6 = 228$

Sum of decimal places in the given numbers = $2 + 2 = 4$

$\therefore 0.06 \times 0.38 = 0.0228$

$$4 places of decimal$$

$viii$ First, we will multiply 623 by 75.

$$\begin{array}{r} 623 \\ \times 75 \\ \hline 3115 \\ 4361\times \\ \hline 46725 \end{array}$$

$\therefore 623 \times 75 = 46725$

Sum of decimal places in the given numbers = $3 + 2 = 5$

$\therefore 0.623 \times 0.75 = 0.46725$

$$5 places of decimal$$

ix First, we will multiply 14 by 46.

$$\begin{array}{r} 14 \\ \times 46 \\ \hline 84 \\ 56\times \\ \hline 644 \end{array}$$

$\therefore 14 \times 46 = 644$

Sum of decimal places in the given numbers = $3 + 2 = 5$

$\therefore 0.014 \times 0.46 = 0.00644$

$$5 places of decimal$$

x First, we will multiply 545 by 176.

$$\begin{array}{r} 545 \\ \times 176 \\ \hline 3270 \\ 3815\times \\ 545\times\times \\ \hline 95920 \end{array}$$

$\therefore 545 \times 176 = 95920$

Sum of decimal places in the given numbers = $1 + 2$ = 3

$\therefore$ 54.5 $\times$ 1.76 = 95.920

$$3 places of decimal$$

= 95.92

xi First, we will multiply 45 by 24.

$$\begin{array}{r} 45 \\ \times 24 \\ \hline 180 \\ 90\times \\ \hline 1080 \end{array}$$

$\therefore$ 45 $\times$ 24 = 1080

Sum of decimal places in the given numbers = $3 + 1$ = 4

$\therefore$ 0.045 $\times$ 2.4 = 0.1080

$$4 places of decimal$$

= 0.108

xii First, we will multiply 1245 by 64.

$$\begin{array}{r} 1245 \\ \times 64 \\ \hline 4980 \\ 7470\times \\ \hline 79680 \end{array}$$

$\therefore$ 1245 $\times$ 64 = 79680

Sum of decimal places in the given numbers = $3 + 1$ = 4

$\therefore$ 1.245 $\times$ 6.4 = 7.9680

$$4 places of decimal$$

= 7.968

Question:38

Find the product:

i 13 × 1.3 × 0.13

ii 2.4 × 1.5 × 2.5

iii 0.8 × 3.5 × 0.05

iv 0.2 × 0.02 × 0.002

v 11.1 × 1.1 × 0.11

vi 2.1 × 0.21 × 0.021

Solution:

i First, we will find the product 13 1.3 0.13.

Now, 13 13 13 = 169 x 13

= 2197

$$\begin{array}{r} 169 \\ \times 13 \\ \hline 507 \\ 169\times \\ \hline 2197 \end{array}$$

Sum of decimal places in the given numbers = $1 + 2$ = 3

So, the product must have three decimal places.

∴ 13 1.3 0.13 = 2.197

ii First, we will find the product 2.4 1.5 2.5.

Now, 24 15 25 = 360 x 25

= 9000

$$\begin{array}{r} 360 \\ \times 25 \\ \hline 1800 \\ 720\times \\ \hline 9000 \end{array}$$

Sum of decimal places in the given numbers = $1 + 1 + 1$ = 3

So, the product must have three decimal places.

∴ 2.4 1.5 2.5 = 9.000

= 9

iii First, we will find the product 0.8 3.5 0.05.

Now, 8 35 5 = 280 5

= 1400

$$\begin{array}{r} 280 \\ \times 5 \\ \hline 1400 \end{array}$$

Sum of decimal places in the given numbers = $1 + 1 + 2$ = 4

So, the product must have four decimal places.

∴ 0.8 3.5 0.05 = 0.1400

= 0.14

iv First, we will find the product 0.2 0.02 0.002.

Now, 2 2 2 = 4 2

= 8

Sum of decimal places in the given numbers = $1 + 2 + 3$ = 6

So, the product must have six decimal places.

∴ 0.2 0.02 0.002 = 0.000008

v First, we will find the product 11.1 1.1 0.11.

Now, 111 11 11 = 1221 11

= 13431

$$\begin{array}{r} 1221 \\ \times 11 \\ \hline 1221 \\ 1221\times \\ \hline 13431 \end{array}$$

Sum of decimal places in the given numbers = $1 + 1 + 2$ = 4

So, the product must have four decimal places.

∴ 11.1 1.1 0.11 = 1.3431

vi First, we will find the product 2.1 0.21 0.021.

Now, 21 21 21 = 441 21

= 9261

$$\begin{array}{r} 441 \\ \times 21 \\ \hline 441 \\ 882\times \\ \hline 9261 \end{array}$$

Sum of decimal places in the given numbers = $1 + 2 + 3$ = 6

So, the product must have six decimal places.

∴ 2.1 0.21 0.021 = 0.009261

Question:39

Evaluate:

i 1.2^2

ii 0.7^2

iii 0.04^2

$iv\ 0.11^2$

Solution:

$i\ 1.2^2 = 1.2 \times 1.2$

First, we will find the product 1.2×1.2.

Now, $12 \times 12 = 144$

Sum of decimal places in the given numbers = $1 + 1 = 2$

So, the product must have two decimal places.

$\therefore 1.2^2 = 1.2 \times 1.2 = 1.44$

$ii\ 0.7^2 = 0.7 \times 0.7$

First, we will find the product 0.7×0.7.

Now, $7 \times 7 = 49$

Sum of decimal places in the given numbers = $1 + 1 = 2$

So, the product must have two decimal places.

$\therefore 0.7^2 = 0.7 \times 0.7 = 0.49$

$iii\ 0.04^2 = 0.04 \times 0.04$

First, we will find the product 0.04×0.04.

Now, $4 \times 4 = 16$

Sum of decimal places in the given numbers = $2 + 2 = 4$

So, the product must have four decimal places.

$\therefore 0.04^2 = 0.04 \times 0.04 = 0.0016$

$iv\ 0.11^2 = 0.11 \times 0.11$

First, we will find the product 0.11×0.11.

Now, $11 \times 11 = 121$

Sum of decimal places in the given numbers = $2 + 2 = 4$

So, the product must have four decimal places.

$\therefore 0.11^2 = 0.11 \times 0.11 = 0.0121$

Question:40

Evaluate:

$i\ 0.3^3$

$ii\ 0.05^3$

$iii\ 1.5^3$

Solution:

$i\ 0.3^3 = 0.3 \times 0.3 \times 0.3$

First, we will find the product $3 \times 3 \times 3$.

Now, $3 \times 3 \times 3 = 27$

Sum of decimal places in the given numbers = $1 + 1 + 1 = 3$

So, the product must have three places of decimal.

$\therefore 0.3^3 = 0.3 \times 0.3 \times 0.3 = 0.027$

$ii\ 0.05^3 = 0.05 \times 0.05 \times 0.05$

First, we will find the product $5 \times 5 \times 5$.

Now, $5 \times 5 \times 5 = 125$

Sum of decimal places in the given numbers = $2 + 2 + 2 = 6$

So, the product must have six decimal places.

$\therefore 0.05^3 = 0.05 \times 0.05 \times 0.05 = 0.000125$

$iii\ 1.5^3 = 1.5 \times 1.5 \times 1.5$

First, we will find the product $15 \times 15 \times 15$.

Now, $15 \times 15 \times 15 = 225 \times 15 = 3375$

$$\begin{array}{r} 225 \\ \times 15 \\ \hline 1125 \\ 225\times \\ \hline 3375 \end{array}$$

Sum of decimal places in the given numbers = $1 + 1 + 1 = 3$

So, the product must have three decimal places.

$\therefore 1.5^3 = 1.5 \times 1.5\ 1.5 = 3.375$

Question:41

A bus can cover 62.5 km in one hour. How much distance can it cover in 18 hours?

Solution:

Distance covered by the bus in 1 hour = 62.5 km

$\therefore$ Distance covered in 18 hours = (62.5 18) km

= 1125 km

Hence, the bus can cover a distance of 1125 km in 18 hours.

Question:42

A tin of oil weighs 16.8 kg. What is the weight of 45 such tins?

Solution:

Weight of 1 tin of oil = 16.8 kg

$\therefore$ Weight of 45 such tins = (16.8 45) kg

= 756 kg

Hence, the weight of 45 tins of oil is 756 kg.

Question:43

A bag of wheat weighs 97.8 kg. How much wheat is contained in 500 such bags?

Solution:

Weight of 1 bag of wheat = 97.8 kg

∴ Weight of 500 such bags = 97.8 x 500 kg

= 48900 kg

Hence, the weight of 500 bags of wheat is 48900 kg.

Question:44

Find the weight of 16 bags of sugar, each weighing 48.450 kg.

Solution:

Weight of 1 bag of sugar = 48.450 kg

∴ Weight of 16 bags of sugar = 48.450 16 kg

= 775.2 kg

$$\begin{array}{r} 48450 \\ \times 16 \\ \hline 290700 \\ 48450\times \\ \hline 775200 \end{array}$$

Hence, the weight of 16 bags of sugar is 775.2 kg.

Question:45

A small bottle holds 0.845 kg of sauce. How much sauce will be there in 72 such bottles?

Solution:

Capacity of 1 sauce bottle = 0.845 kg

∴ Capacity of 72 such bottles = (0.845 72) kg

= 60.84 kg

$$\begin{array}{r} 845 \\ \times 72 \\ \hline 1690 \\ 5915\times \\ \hline 60840 \end{array}$$

Hence, the capacity of 72 bottles of sauce will be 60.84 kg.

Question:46

A bottle holds 925 g of jam. How many kg of jam will be there in 25 such bottles?

Solution:

Weight of 1 bottle of jam = 925 g =0.925 kg

∴ Weight of 25 such bottles = (0.925 25) kg

= 23.125 kg

```
   925
  ×25
------
  6425
1850×
------
 23125
```

∴ The weight of 25 bottles of jam will be 23.125 kg.

Question:47

If one drum can hold 16.850 litres of oil, how many litres can 48 such drums hold?

Solution:

Capacity of 1 drum of oil = 16.850 litres

∴ Capacity of 48 such drums = 16.850 x 48 litres

= 808.800 litres

```
  16850
  ×48
------
 134800
67400×
------
 808800
```

Hence, the capacity of 48 drums of oil is 808.800 litres.

Question:48

1 kg of rice costs Rs 56.80. What is the cost of 16.25 kg of rice?

Solution:

Cost of 1 kg of rice =Rs 56.80

∴ Cost of 16.25 kg of rice = Rs (56.80 16.25)

= Rs 923

```
   5680
  ×1625
-------
  28400
 11360×
34080××
5680×××
-------
9230000
```

Hence, the cost of 16.25 kg of rice is Rs 923.

Question:49

1 metre of cloth costs Rs 108.50. What is the cost of 18.5 metres of this cloth?

Solution:

Cost of 1 m of cloth = Rs 108.50

∴ Cost of 18.5 m of cloth = Rs 108.50 x 18.5

= Rs 2007.25

```
  10850
 ×185
-------
  54250
 86800×
10850××
-------
2007250
```

Hence, the cost of 18.5 m of cloth is Rs 2007.25.

Question:50

A car can cover a distance of 8.6 km on one litre of petrol. How far can it go on 36.5 litres of petrol?

Solution:

Distance covered by the car with 1 litre of petrol = 8.6 km

∴ Distance covered with 36.5 litres of petrol = (8.6 36.5) km

= 313.900 km

Hence, the distance covered by the car with 36.5 litres of petrol is 313.900 km.

Question:51

A taxi driver charges Rs 9.80 per km. How much will he charge for a journey of 106.5 km?

Solution:

Charges for 1 km = Rs 9.80

∴ Charges for 106.5 km = Rs (9.80 106.5)

= Rs 1043.70

Hence, the taxi driver will charge Rs 1043.70 for a journey of 106.5 km.

Question:52

Divide:

i 131.6 by 10

ii 32.56 by 10

iii 4.38 by 10

iv 0.34 by 10

v 0.08 by 10

vi 0.062 by 10

Solution:
We have the following:

i 131.6 ÷ 10 = Shift the decimal point to the left by 1 place

ii 32.56 ÷ 10 = Shift the decimal point to the left by 1 place

iii 4.38 ÷ 10 = Shift the decimal point to the left by 1 place

iv 0.34 ÷ 10 = Shift the decimal point to the left by 1 place

v 0.08 ÷ 10 = Shift the decimal point to the left by 1 place

vi 0.062 ÷ 10 = Shift the decimal point to the left by 1 place

Question:53
Divide:

i 137.2 by 100
ii 23.4 by 100
iii 4.7 by 100
iv 0.3 by 100
v 0.58 by 100
vi 0.02 by 100

Solution:
We have the following:

i 137.2 ÷ 100 = Shifting the decimal point to the left by 2 places

ii 23.4 ÷ 100 = Shifting the decimal point to the left by 2 places

iii 4.7 ÷ 100 = Shifting the decimal point to the left by 2 places

iv 0.3 ÷ 100 = Shifting the decimal point to the left by 2 places

v 0.58 ÷ 100 = Shifting the decimal point to the left by 2 places

vi 0.02 ÷ 100 = Shifting the decimal point to the left by 2 places

Question:54
Divide:

i 1286.5 by 1000
ii 354.16 by 1000
iii 38.9 by 1000
iv 4.6 by 1000
v 0.8 by 1000
vi 2 by 1000
Solution:
We have the following:

i 1286.5 ÷ 1000 = Shift the decimal point to the left by 3 places

ii 354.16 ÷ 1000 = Shift the decimal point to the left by 3 places

iii 38.9 ÷ 1000 = Shift the decimal point to the left by 3 places

iv 4.6 ÷ 1000 = Shift the decimal point to the left by 3 places

v 0.8 ÷ 1000 = Shift the decimal point to the left by 3 places

vi 2 ÷ 1000 = Shift the decimal point to the left by 3 places

Question:55
Divide:

i 12 by 8
ii 63 by 15
iii 47 by 20
iv 101 by 25
v 31 by 40
vi 11 by 16
Solution:
i 12 ÷ 8 =

$$
\begin{array}{r|l}
2 & 3 \\
\cline{2-2}
 & -2 \\
\cline{1-1}
 & 10 \\
 & -10 \\
\cline{1-1}
 & \times
\end{array}
\quad 1.5
$$

$\therefore 12 \div 8 = 1.5$

ii $63 \div 15 =$

$$
\begin{array}{r|l}
5 & 21 \\
\cline{2-2}
 & 20 \\
\cline{1-1}
 & 10 \\
 & -10 \\
\cline{1-1}
 & \times
\end{array}
\quad 4.2
$$

$\therefore 63 \div 15 = 4.2$

iii $47 \div 20 =$

$$
\begin{array}{r|l}
20 & 47 \\
\cline{2-2}
 & -40 \\
\cline{1-1}
 & 70 \\
 & -60 \\
\cline{1-1}
 & 100 \\
 & -100 \\
\cline{1-1}
 & \times
\end{array}
\quad 2.35
$$

$\therefore 47 \div 20 = 2.35$

iv $101 \div 25 =$

$$
\begin{array}{r|l}
25 & 101 \\
\cline{2-2}
 & -100 \\
\cline{1-1}
 & 100 \\
 & -100 \\
\cline{1-1}
 & \times
\end{array}
\quad 4.04
$$

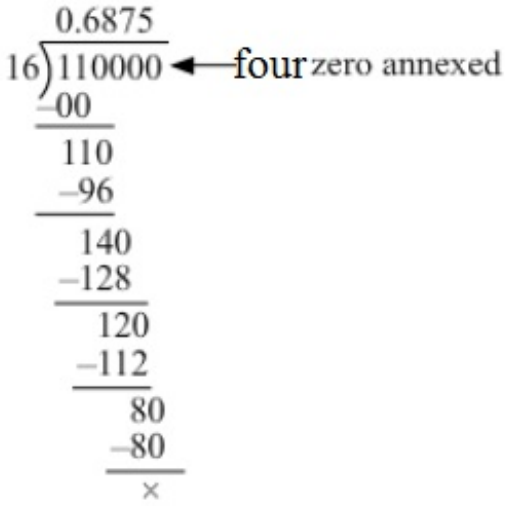
$\therefore 101 \div 25 = 4.04$

v $31 \div 40$

$$
\begin{array}{r|l}
 & 0.775 \\
\cline{2-2}
40 & 3100 \leftarrow \text{two zero annexed} \\
\cline{1-1}
 & -0 \\
\cline{1-1}
 & 31 \\
 & -28 \\
\cline{1-1}
 & 30 \\
 & -28 \\
\cline{1-1}
 & 20 \\
 & -20 \\
\cline{1-1}
 & \times
\end{array}
$$

$\therefore 31 \div 40 = 0.775$

vi 11 ÷ 16 =



∴ 11 ÷ 16 = 0.6875

Question:56

Divide:

i 43.2 by 6
ii 60.48 by 12
iii 117.6 by 21
iv 217.44 by 18
v 2.575 by 25
vi 6.08 by 8
vii 0.765 by 9
viii 0.768 by 16
ix 0.175 by 25
x 0.3322 by 11
xi 2.13 by 15
xii 6.54 by 12
xiii 5.52 by 16
xiv 1.001 by 14
xv 0.477 by 18

Solution:

i We have:

43.2 ÷ 6

$$
\begin{array}{r}
7.2 \\
6\overline{)43.2} \\
-42 \\
\hline
12 \\
-12 \\
\hline
\times
\end{array}
$$

$\therefore 43.2 \div 6 = 7.2$

ii We have:

$60.48 \div 12$

$$
\begin{array}{r}
5.04 \\
12\overline{)60.48} \\
-60 \\
\hline
04 \\
-0 \\
\hline
48 \\
-48 \\
\hline
\times
\end{array}
$$

$\therefore 60.48 \div 12 = 5.04$

iii We have:

$117.6 \div 21$

$$
\begin{array}{r}
5.6 \\
21\overline{)1176} \\
-105 \\
\hline
126 \\
-126 \\
\hline
\times
\end{array}
$$

$\therefore 117.6 \div 21 = 5.6$

iv We have:

$217.44 \div 18$

$$
\begin{array}{r}
12.08 \\
18\overline{)217.44} \\
-18 \\
\hline
37 \\
-36 \\
\hline
144 \\
-144 \\
\hline
\times
\end{array}
$$

$\therefore 217.44 \div 18 = 12.08$

v We have:

$2.575 \div 25$

$$
\begin{array}{r|l}
25 & 2.575 \\
-0 & \\
\hline
25 & \\
-25 & \\
\hline
\times 7 & \\
-0 & \\
\hline
75 & \\
-75 & \\
\hline
\times &
\end{array}
\quad 0.103
$$

$\therefore 2.575 \div 25 = 0.103$

vi We have:

$6.08 \div 8$

$$
\begin{array}{r|l}
8 & 6.08 \\
-0 & \\
\hline
60 & \\
-56 & \\
\hline
48 & \\
-48 & \\
\hline
\times &
\end{array}
\quad 0.76
$$

$\therefore 6.08 \div 8 = 0.76$

vii We have:

$0.765 \div 9$

$$
\begin{array}{r|l}
9 & 0.765 \\
-0 & \\
\hline
076 & \\
-72 & \\
\hline
45 & \\
-45 & \\
\hline
\times &
\end{array}
\quad 0.085
$$

$\therefore 0.765 \div 9 = 0.085$

viii We have:

$0.768 \div 16$

$$
\begin{array}{r|l}
16 & 0.768 \\
-0 & \\
\hline
\times 76 & \\
-64 & \\
\hline
128 & \\
-128 & \\
\hline
\times &
\end{array}
\quad 0.048
$$

$\therefore 0.768 \div 16 = 0.048$

ix We have:

$0.175 \div 25$

x We have:

0.3322 ÷ 11

$$
\begin{array}{r}
0.0302 \\
11\overline{)0.3322} \\
-0 \\
\hline
\times 3 \\
-0 \\
\hline
33 \\
-33 \\
\hline
\times 2 \\
-0 \\
\hline
22 \\
-22 \\
\hline
\times
\end{array}
$$

∴ 0.3322 ÷ 11 = 0.0302

xi We have:

2.13 ÷ 15

$$
\begin{array}{r}
0.142 \\
15\overline{)2.130} \leftarrow \text{one zero annexed} \\
-0 \\
\hline
21 \\
-15 \\
\hline
63 \\
-60 \\
\hline
30 \\
-30 \\
\hline
\times
\end{array}
$$

∴ 2.13 ÷ 15 = 0.142

xii We have:

6.54 ÷ 12

$$
\begin{array}{r}
0.545 \\
12\overline{)6.540} \leftarrow \text{one zero annexed} \\
-0 \\
\hline
65 \\
-60 \\
\hline
54 \\
-48 \\
\hline
60 \\
-60 \\
\hline
\times
\end{array}
$$

∴ 6.54 ÷ 12 = 0.545

xiii We have:

5.52 ÷ 16

```
   0.345
16)5.520  ← one zero annexed
  –0
  ---
   55
  –48
  ---
    72
   –64
   ---
     80
    –80
    ---
     ×
```

∴ 5.52 ÷ 16 = 0.345

xiv We have:

1.001 ÷ 14

```
   0.0715
14)1.0010  ← one zero annexed
  –0
  ---
   100
   –98
   ---
     21
    –14
    ---
     70
    –70
    ---
     ×
```

∴ 1.001 ÷ 14 = 0.0715

xv We have:

0.477 ÷ 18

```
   0.0265
18)0.4770  ← one zero annexed
  –0
  ---
  ×4
  –0
  ---
   47
  –36
  ---
   117
  –108
  ----
     90
    –90
    ---
     ×
```

∴ 0.477 ÷ 18 = 0.0265

Question:57

Divide:

i 16.46 ÷ 20
ii 403.8 ÷ 30
iii 19.2 ÷ 80
iv 156.8 ÷ 200
v 12.8 ÷ 500
vi 18.08 ÷ 400

Solution:

i 16.46 ÷ 20 =

ii 403.8 ÷ 30 =

iii 19.2 ÷ 80 =

iv 156.8 ÷ 200 =

v 12.8 ÷ 500 =

vi 18.08 ÷ 400 =

Question:58

Divide:

i 3.28 by 0.8
ii 0.288 by 0.9
iii 25.395 by 1.5
iv 2.0484 by 0.18
v 0.228 by 0.38
vi 0.8085 by 0.35
vii 21.976 by 1.64
viii 11.04 by 1.6
ix 6.612 by 11.6
x 0.076 by 0.19
xi 148 by 0.074
xii 16.578 by 5.4
xiii 28 by 0.56
xiv 204 by 0.17
xv 3 by 80

Solution:

i 3.28 ÷ 0.8 =

Now, we have:

$$\begin{array}{r} 8\overline{)32.8(}4.1 \\ -32 \\ \hline \times 8 \\ -8 \\ \hline \times \end{array}$$

$\therefore$

ii $0.288 \div 0.9 =$

Now, we have:

$$\begin{array}{r} 9\overline{)2.88(}0.32 \\ -0 \\ \hline 28 \\ -27 \\ \hline 18 \\ -18 \\ \hline \times \end{array}$$

$\therefore$

iii $25.395 \div 1.5 =$

Now, we have:

$$\begin{array}{r} 15\overline{)253.95(}16.93 \\ -15 \\ \hline 103 \\ -90 \\ \hline 139 \\ -135 \\ \hline 45 \\ -45 \\ \hline \times \end{array}$$

$\therefore$

iv $2.0484 \div 0.18 =$

Now, we have:

$$\begin{array}{r} 18\overline{)204.84(}11.38 \\ -18 \\ \hline 24 \\ -18 \\ \hline 68 \\ -54 \\ \hline 144 \\ -144 \\ \hline \times \end{array}$$

∴

v 0.228 ÷ 0.38 =

Now, we have:

$$\begin{array}{r} 38\overline{)22.8}(0.6 \\ -0 \\ \hline 228 \\ -228 \\ \hline \times \end{array}$$

∴

vi 0.8085 ÷ 0.35 =

Now, we have:

$$\begin{array}{r} 35\overline{)80.85}(2.31 \\ -70 \\ \hline 108 \\ -105 \\ \hline 35 \\ -35 \\ \hline \times \end{array}$$

∴

vii 21.976 ÷ 1.64 =

Now, we have:

$$\begin{array}{r} 164\overline{)2197.6}(13.4 \\ -164 \\ \hline 557 \\ -492 \\ \hline 656 \\ -656 \\ \hline \times \end{array}$$

∴

viii 11.04 ÷ 1.6 =

Now, we have:

$$\begin{array}{r} 16\overline{)110.4}(6.9 \\ -96 \\ \hline 144 \\ -144 \\ \hline \times \end{array}$$

∴

ix 6.612 ÷ 11.6 =

Now, we have:

$$
\begin{array}{r}
116\overline{)66.12\ (0.57} \\
-0 \\
\hline
661 \\
-580 \\
\hline
812 \\
-812 \\
\hline
\times
\end{array}
$$

∴

x 0.076 ÷ 0.19 =

Now, we have:

$$
\begin{array}{r}
19\overline{)7.6\ (0.4} \\
-0 \\
\hline
76 \\
-76 \\
\hline
\times
\end{array}
$$

∴

xi 48 ÷ 0.074

xii 16.578 ÷ 5.4 =

Now, we have:

$$
\begin{array}{r}
54\overline{)165.78(3.07} \\
-162 \\
\hline
37 \\
-0 \\
\hline
378 \\
-378 \\
\hline
\times
\end{array}
$$

∴

xiii 28 ÷ 0.56

xiv 204 ÷ 0.17

xv 3 ÷ 80 =

Now, we have:

$$
\begin{array}{r}
0.0375 \\
80\overline{)30000} \leftarrow \text{four zero annexed} \\
-0 \\
\hline
30 \\
-0 \\
\hline
300 \\
-240 \\
\hline
600 \\
-560 \\
\hline
400 \\
-400 \\
\hline
\times
\end{array}
$$

∴ = 0.0375

Question:59

The total cost of 24 chairs is Rs 9255.60. Find the cost of each chair.

Solution:

Cost of 24 chairs = Rs 9255.60

∴ Cost of one chair = Rs

= Rs

= Rs

= Rs 385.65

$$
\begin{array}{r}
240\overline{)92556}(385.65 \\
-720 \\
\hline
2055 \\
-1920 \\
\hline
1356 \\
-1200 \\
\hline
1560 \\
-1440 \\
\hline
1200 \\
-1200 \\
\hline
\times
\end{array}
$$

Hence, the cost of one chair is Rs 385.65.

Question:60

1.8 m of cloth is required for a shirt. How many such shirts can be made from a piece of cloth 45 m

long?

Solution:

Cloth required for 1 shirt = 1.8 m

∴ Number of shirts that can be made from 45 m of cloth = = = = = 25

Hence, 25 shirts can be made from a piece of cloth of length 45 m.

Question:61

A car covers a distance of 22.8 km in 2.4 litres of petrol. How much distance will it cover in 1 litre of petrol?

Solution:

Distance covered by the car with 2.4 litres of petrol = 22.8 km

∴ Distance covered with 1 litre of petrol = km

= km = km = km = km

Hence, the distance covered by the car with 1 litre of petrol is km.

Question:62

A tin holds 16.5 litres of oil. How many such tins will be required to hold 478.5 litres of oil?

Solution:

Capacity of 1 tin of oil = 16.5 litres

∴ Number of tins required to hold 478.5 litres of oil =

Hence, 29 oil tins will be required to hold 478.5 litres of oil.

Question:63

The weight of 37 bags of sugar is 3644.5 kg. If all the bags weigh equally, what is the weight of each bag?

Solution:

Weight of 37 bags of sugar = 3644.5 kg

∴ Weight of 1 bag of sugar = = 98.5 kg

```
37 ) 3644.5 ( 98.5
   - 333
   -----
     314
   -  296
   ------
      185
    - 185
    -----
      ×
```

Hence, each bag of sugar weighs 98.5 kg.

Question:64

If 69 buckets of equal capacity can be filled with 586.5 litres of water, what is the capacity of eacch bucket?

Solution:

Capacity of 69 buckets of water = 586.5 litres

∴ Capacity of one such bucket = litres = 8.5 litres.

$$
\begin{array}{r}
8.5 \\
69\overline{)\,586.5\,} \\
-\,552 \\
\hline
345 \\
-\,345 \\
\hline
\times
\end{array}
$$

Hence, the capacity of each water bucket is 8.5 litres.

Question:65

Monica cuts 46 m of cloth into peices of 1.15 m each. How many pieces does she get?

Solution:

Length of one piece of cloth = 1.15 m

∴ Number of pieces she gets from 46 m of cloth =

$$= = = 40$$

Hence, Monica has 40 pieces of cloth each of length 1.15 m.

Question:66

Mr Soni bought some bags of cement, each weighing 49.8 kg. If the total weight of all the bags is 1792.8 kg, how many bags did he buy?

Solution:

Total weight of all the bags of cement = 1792.8 kg

Weight of each bag = 49.8 kg

Number of bags =

$$=$$

$$
\begin{array}{r}
36 \\
498\overline{)\,17928\,} \\
-1494 \\
\hline
2988 \\
-2988 \\
\hline
\times
\end{array}
$$

Hence, Mr. Soni bought 36 bags of cement.

Question:67

How many pieces of plywood, each 0.35 cm thick, are required to make a pile 1.89 m high?

Solution:

Thickness of the pile of plywood pieces = 1.89 m = 189 cm

Thickness of one piece of plywood = 0.35 cm

∴ Required number of plywood pieces =

$$
\begin{array}{r}
35\overline{)18900}\,(540 \\
-175 \\
\hline
140 \\
-140 \\
\hline
0000 \\
-0000 \\
\hline
\times
\end{array}
$$

Hence, 540 pieces of plywood are required to make a pile of height 1.89 m.

Question:68

The product of two decimals is 261.36. If one of them is 17.6, find the other.

Solution:

Product of the given decimals = 261.36

One decimal = 17.6

The other decimal = 261.36 ÷ 17.6

=

= 14.85

$$
\begin{array}{r}
176\overline{)2613.6}\,(14.85 \\
-176 \\
\hline
853 \\
-704 \\
\hline
1496 \\
-1408 \\
\hline
880 \\
-880 \\
\hline
\times
\end{array}
$$

Hence, the other decimal is 14.85.

Question:69

Mark ✓ against the correct answer

.06 = ?

a

b
c
d none of these
Solution:
b

0.06 =

Question:70
Mark ✓ against the correct answer
1.04 = ?

a
b
c
d none of these
Solution:
c

1.04 =

Question:71
Mark ✓ against the correct answer

a 2.8
b 2.08
c 2.008
d none of these
Solution:
b 2.08

On dividing, we get:

$$
\begin{array}{r}
2.08 \\
25\overline{)52\,(} \\
-50 \\
\hline
200 \\
-200 \\
\hline
\times
\end{array}
$$

∴ = 2.08

Question:72

Mark ✓ against the correct answer

6 cm = ?

a 0.006 km
b 0.0006 km
c 0.00006 km
d none of these

Solution:

c 0.00006 km

6 cm = m = 0.06 m

0.06 m = km = 0.00006 km

∴ 6 cm = 0.00006 km

Question:73

Mark ✓ against the correct answer

70 g = ?

a 0.7 kg
b 0.07 kg
c 0.007 kg
d none of these

Solution:

b 0.07 kg

70 g = kg = kg

= 0.07 kg

∴ 70 g = 0.07 kg

Question:74

Mark ✓ against the correct answer

5 kg 6 g = ?

a 5.0006 kg
b 5.06 kg
c 5.006 kg
d 5.6 kg

Solution:

c 5.006 kg

5 kg 6 g = (5 1000) g + 6 g = 5006 g

= kg = 5.006 kg

∴ 5 kg 6 g = 5.006 kg

Question:75

Mark ✓ against the correct answer

2 km 5 m = ?

a 2.5 km
b 2.05 km
c 2.005 km
d 2.0005 km

Solution:

c 2.005 km

2 km 5 m = (2 1000) m + 5 m = 2005 m

= km = 2.005 km

∴ 2 km 5 m = 2.005 km

Question:76

Mark ✓ against the correct answer

1.007 – 0.7 = ?

a 1

b 0.37

c 0.307

d none of these

Solution:

c 0.307

Converting the given decimals into like decimals, we get:

1.007 and 0.700

Writing them in column form with the larger one at the top and subtracting, we get:

$$\begin{array}{r} 1.007 \\ -0.700 \\ \hline 0.307 \end{array}$$

Hence, the required number is 0.307.

Question:77

Mark ✓ against the correct answer

What should be subtracted from .1 to get .03?

a .7

b .07

c .007

d none of these

Solution:

b .07

We have:

$0.1 - x = 0.03$

$\Rightarrow x = 0.1 - 0.03$

Converting the given decimals into like decimals, we get:

0.10 and 0.03

Writing them in column form with the larger one at the top and subtracting, we get:

$$\begin{array}{r} 0.10 \\ -0.03 \\ \hline 0.07 \end{array}$$

$\therefore x = 0.07$

Hence, the required number is 0.07.

Question:78

Mark ✓ against the correct answer

What should be added to 3.07 to get 3.5?

a .57

b .34

c .43

d .02

Solution:

c .43

We have:

$3.07 + x = 3.5$

$\Rightarrow x = 3.5 - 3.07$

Converting the given decimals into like decimals, we get:

3.07 and 3.50

Writing them in column form with the larger one at the top and subtracting, we get:

$$\begin{array}{r} 3.50 \\ -3.07 \\ \hline 0.43 \end{array}$$

$\therefore x = 0.43$

Hence, 0.43 should be added to 3.07 to get 3.5.

Question:79

Mark ✓ against the correct answer

$0.23 \times 0.3 = ?$

a 0.69

b 6.9

c 0.069

d none of these

Solution:

c 0.069

First, we will multiply 23 by 3.

i.e., 23 3 = 69

Sum of decimal places in the given decimals = 2 + 1 = 3

∴ 0.23 0.3 = 0.069 3 places of decimal

Question:80

Mark ✓ against the correct answer

$0.02 \times 30 = ?$

a 6

b 0.6

c 0.06

d none of these

Solution:

b 0.6

We have:

$2\ 30 = 60$

$\therefore 0.02\ 30 = 0.60$ 2 places of decimal

$= 0.6$

Question:81

Mark ✓ against the correct answer

$0.25 \times 0.8 = ?$

a 0.02

b 0.2

c 0.002

d 2

Solution:

b 0.2

First, we will multiply 25 by 8.

$\therefore 25\ 8 = 200$

Sum of decimal places in the given decimals = $2 + 1 = 3$

$\therefore 0.25\ 0.8 = 0.200$ 3 places of decimal

$= 0.2$

Question:82

Mark ✓ against the correct answer

$0.4 \times 0.4 \times 0.4 = ?$

a 6.4

b .64
c .064
d none of these
Solution:
c .064

First, we will find the product 4 4 4 = 64
Sum of decimal places in the given decimals = 1 + 1 + 1 = 3
∴ 0.4 × 0.4 × 0.4 = 0.064 3 places of decimal

Question:83
Mark ✓ against the correct answer
1.1 × .1 ×.01 = ?

a .011
b .0011
c .11
d none of these
Solution:
b .0011

First, we will find the product 11 1 1.
Sum of decimal places in the given decimals = 1 + 1 + 2 = 4
∴ 1.1 0.1 0.01 = 0.0011 4 places of decimal

Question:84
Mark ✓ against the correct answer
2.08 ÷ .16 = ?

a 13
b .13
c 1.3
d none of these
Solution:
a 13

2.08 ÷ 0.16 = = =

Question:85

Mark ✓ against the correct answer

1.02 ÷ 6 = ?

a 1.7
b 0.17
c 0.017
d none of these

Solution:

b 0.17

1.02 ÷ 6 =

Question:86

Mark ✓ against the correct answer

30.94 ÷ 0.7 = ?

a 44.2
b 4.42
c 442
d 0.442

Solution:

a 44.2

30.94 ÷ 0.7 =

Question:87

Mark ✓ against the correct answer

2.73 ÷ 1.3 = ?

a 21
b 2.1
c 0.21
d none of these

Solution:

b 2.1

2.73 ÷ 1.3 =

Question:88

Mark ✓ against the correct answer

89.1 ÷ 2.2 = ?

a 40.5
b 4.05
c 41
d 41.5

Solution:

a 40.5

89.1 ÷ 2.2 =

Question:89

Mark ✓ against the correct answer

0.5 × 0.05 = ?

a 0.25
b 2.5
c 0.025
d none of these

Solution:

c 0.025

First, we will multiply 5 by 5.

i.e., 5 5 = 25

Sum of decimal places in the given decimals = 1 + 2 = 3

∴ 0.5 × 0.05 = 0.025 3 places of decimal

Question:90

If the cost of a pen is Rs 32.50, find the cost of 24 such pens.

Solution:

Cost of 1 pen = Rs 32.50

∴ Cost of 24 such pens = Rs (32.50 24)

= Rs 780

Hence, the cost of 24 pens is Rs 780.

Question:91

A bus can cover 64.5 km in an hour. How much distance can it cover in 18 hours?

Solution:

Distance covered by the bus in 1 h = 64.5 km

∴ Distance covered in 18 h = (64.5 18) km

= 1161 km

Hence, the bus can cover a distance of 1161 km in 18 h.

Question:92

Find the product 0.68 × 6.5 × 0.04.

Solution:

First, we will find the product 68 65 4.

Now, 68 65 4 = 4420 4 = 17680

Sum of decimal places in the given decimals = 2 + 1 + 2 = 5

So, the product have five decimal places.

∴ 0.68 6.5 0.04 = 0.17680

= 0.1768

Question:93

Each bag of cement weighs 48.5 kg. How many such bags will weigh 2231 kg?

Solution:

Total weight of all the bags = 2231 kg

Weight of each bag = 48.5 kg

Number of bags =

=kg

=

Hence, 46 bags of cement will weigh 2231 kg.

Question:94

Divide:

i 0.196 by 1.4

ii 39.168 by 1.2

iii 0.228 by 0.38

Solution:

i 0.196 ÷ 1.4 =

$$
\begin{array}{r}
14\overline{)1.96(}\,0.14 \\
-0 \\
\hline
19 \\
-14 \\
\hline
56 \\
-56 \\
\hline
\times
\end{array}
$$

ii 39.168 ÷ 1.2 =

$$
\begin{array}{r}
12\overline{)391.68(}\,32.64 \\
-36 \\
\hline
31 \\
-24 \\
\hline
76 \\
-72 \\
\hline
48 \\
-48 \\
\hline
\times
\end{array}
$$

iii 0.228 ÷ 0.38 =

$$
\begin{array}{r}
38\overline{)22.8(}\,0.6 \\
-0 \\
\hline
228 \\
-228 \\
\hline
\times
\end{array}
$$

Question:95

The product of two decimals is 1.824. If one of them is 0.64, find the other.

Solution:

Product of the given decimals = 1.824

One decimal = 0.64

The other decimal = 1.824 ÷ 0.64

=

Hence, the other decimal is 2.85.

Question:96

How many pieces of plywood, each of 0.45 cm thick, are required to make a pile 2.43 m high?

Solution:

Thickness of the pile of plywoods = 2.43 m = 2.43 100 cm = 243 cm

Thickness of one piece of plywood = 0.45 cm

∴ Required number of pieces of plywood =

$$45\overline{)24300}\,(540$$
$$-225$$
$$180$$
$$-180$$
$$\times$$

Hence, the required number of pieces of plywood is 540.

Question:97

Each side of a polygon is 3.8 cm in length and its perimeter is 22.8 cm. How many sides does the polygon have?

Solution:

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

Length of each side of the polygon = 3.8 cm

∴ Perimeter of the polygon = (3.8 *n*) cm

But it is given that its perimeter is 22.8 cm.

∴ (3.8 *n*) cm = 22.8 cm

⇒ *n* = = = 6

Hence, the given polygon has six sides.

Question:98

Mark ✓ against the correct answer

a 2.4

b 2.04

c 2.004

d none of these

Solution:

b 2.04

$$
\begin{array}{r}
2.04 \\
25\overline{)51} \\
-50 \\
\hline
10 \\
-0 \\
\hline
100 \\
-100 \\
\hline
\times
\end{array}
$$

Question:99

Mark ✓ against the correct answer

1.008 = ?

a

b

c

d none of these

Solution:

b

1.008 =

Question:100

Mark ✓ against the correct answer

2 kg 5 g = ?

a 2.5 kg

b 2.05 kg

c 2.005 kg

d none of these

Solution:

c 2.005 kg

2 kg 5 g = (2 1000) g + 5 g = 2005 g

= kg = 2.005 kg

Question:101

Mark ✓ against the correct answer

0.12 ÷ .15 = ?

a 0.8

b 0.08

c 0.008

d none of these

Solution:

b 0.08

We have:

0.012 ÷ 0.15 =

$$
\begin{array}{r}
0.08 \\
15\overline{)1.20} \\
-0 \\
\hline
120 \\
-120 \\
\hline
0 \\
\hline
\end{array}
\quad \longleftarrow \text{one zero annexed}
$$

Question:102

Mark ✓ against the correct answer

1.1 × .1 × .01 = ?

a .11

b .011

c .0011

d none of these

Solution:

c .0011

First, we will find the product 11 1 1.

i.e., 11 1 1 = 11 1 = 11

Sum of decimal places in the given decimals = 1 + 1 + 2 = 4

∴ 1.1 0.1 0.01 = 0.0011 4 places of decimal

Question:103

Mark ✓ against the correct answer

4.669 ÷ 2.3 = ?

a 2.3
b 2.03
c 2.003
d none of these
Solution:
b 2.03

4.669 ÷ 2.3 =

$$
\begin{array}{r}
2.03 \\
23\overline{)46.69} \\
-46 \\
\hline
\times 6 \\
-0 \\
\hline
69 \\
-69 \\
\hline
\times
\end{array}
$$

Question:104
Mark ✓ against the correct answer
What should be added to 2.06 to get 3.1?

a 1.4
b 1.24
c 1.04
d none of these
Solution:
Option c is correct.
Let the number added be x.
We have:
$2.06 + x = 3.1$
$\Rightarrow x = 3.1 - 2.06$

Converting the given decimals into like decimals, we get:
2.06 and 3.10
Thus, required number = 3.10 – 2.06 = 1.04

Hence, 1.04 should be added to 2.06 to get 3.1.

Question:105
Mark ✓ against the correct answer

What should be subtracted from .1 to get .04?

a 0.6
b 0.06
c 0.006
d none of these

Solution:

b 0.06

We have:

$0.1 - x = 0.04$

$\Rightarrow x = 0.1 - 0.04$

Converting the given decimals into like decimals, we get:

0.10 and 0.04

Thus, required number = 0.10 – 0.04 = 0.06

Hence, 0.06 should be subtracted from 0.1 to get 0.04.

Question:106

Fill in the blanks.

i 1.001 ÷ 14 = ...
ii 204 ÷ 0.17 = ...
iii 0.47 × 5.3 = ...
iv 0.023 × 0.03 = ...
v 0.7^2 = ...
vi 0.05^3 = ...

Solution:

i 1.001 ÷ 14 = 0.0715

Explanation:

$$
\begin{array}{r}
0.0715 \\
14\overline{)\,1.0010} \\
-0 \\
\hline
100 \\
-98 \\
\hline
21 \\
-14 \\
\hline
70 \\
-70 \\
\hline
\times
\end{array}
$$

← one zero annexed

ii 204 ÷ 0.17 = 1200

Explanation:

iii $0.47 \times 5.3 = \underline{2.491}$

Explanation: First, we will multiply 47 by 53.

$$\begin{array}{r} 47 \\ \times 53 \\ \hline 141 \\ 235\times \\ \hline 2491 \end{array}$$

$\therefore 47\ 53 = 2491$

Sum of decimal places in the given decimals = $2 + 1 = 3$

$\therefore 0.47 \times 5.3 = 2.491$

iv $0.7^2 = \underline{0.49}$

Explanation: $0.7^2 = 0.7 \times 0.7$

First, we will find the product 0.7×0.7.

Now, $7 \times 7 = 49$

Sum of decimal places in the given decimals = $1 + 1 = 2$

So, the product must have two decimal places.

$\therefore 0.7^2 = 0.7 \times 0.7 = 0.49$

v $0.05^3 = \underline{0.000125}$

Explanation: First, we will find the product $0.05 \times 0.05 \times 0.05$.

Now, $5 \times 5 \times 5 = 125$

Sum of decimal places in the given decimals = $2 + 2 + 2 = 6$

So, the product must have six decimal places.

$\therefore 0.05^3 = 0.05 \times 0.05 \times 0.05 = 0.000125$

Question:107

Write 'T' for true and 'F' for false

i $0.5 \times 0.05 = 0.25$

ii $0.25 \times 0.8 = 0.2$

iii $0.35 \div 0.7 = 0.5$

iv $.4 \times .4 \times .4 = 0.64$

v 6 cm = 0.06 m

Solution:

i T

We have:

0.5×0.05

Now, $5 \times 5 = 25$

Sum of decimal places in the given decimals = $1 + 2 = 3$

$\therefore 0.5 \times 0.05 = 0.025$

ii T

We have:

0.25×0.8

Now, $25 \times 8 = 200$

Sum of decimal places in the given decimals = $2 + 1 = 3$

$\therefore 0.25 \times 0.8 = 0.200 = 0.2$

iii T

We have:

$0.35 \div 0.7 =$

iv F

We have:

$0.4 \times 0.4 \times 0.4$

Now, $4 \times 4 \times 4 = 64$

Sum of decimal places in the given decimals = $1 + 1 + 1 = 3$

$\therefore 0.4 \times 0.4 \times 0.4 = 0.064$

v T

6 cm = m = 0.06 m