

Exercises - 3A

Q. 1 Answer

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

$$(ii) 0.75 = \frac{75}{100} = \frac{75 \div 25}{100 \div 25} = \frac{3}{4}$$

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

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

Q. 2 Answer :

We have

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

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

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

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

Q. 3 Answer :

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

On dividing. We get :

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

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

On dividing. We get

Q. 4 Answer :

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

Q. 5 Answer :

We have

(i) Comparing the whole number part. $78 > 69$.

Thus $78.23 > 69.25$

- (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. $0.98 < 1.07$

Q. 6 Answer :

- (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 the 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 and 5.55
- (iii) Converting the given decimals into like decimals. We get
6.84, 6.48, 6.80, 6.40, 6.08
Clearly $6.08 < 6.40 < 6.48 < 6.84$
Hence, the given decimals in ascending order are 6.08, 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

Q. 7 Answer :

- (i) Converting the given decimals into like decimals. We get

7.80, 8.34, 74.40, 0.74

Clearly $74.40 > 8.34 > 7.44 > 7.40 > 0.74$

Hence, the given decimals in ascending 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, 2.007, 2.300

Clearly $2.600 > 2.300 > 2.260 > 2.060 > 2.007$

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

Q. 8 Answer :

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

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

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

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

Q. 9 Answer :

We have

$$(i) \quad 8 \text{ paise} = \text{Rs } \frac{8}{100} = \text{Rs } 0.08$$

$$(ii) \quad 9 \text{ rupees } 75 \text{ paise} = \text{Rs } \left(9 + \frac{75}{100}\right) = \text{Rs } (9 + .075) = \text{Rs } 9.75$$

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

Q. 10 Answer :

We have

$$(i) \quad 65 \text{ m} = \frac{65}{1000} \text{ km} = 0.065 \text{ km}$$

$$\therefore 65 \text{ m} = 0.065 \text{ km}$$

$$(ii) \quad 284 \text{ m} = \frac{284}{1000} \text{ km} = 0.284 \text{ m}$$

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

Exercises – 3B

Q. 1 Answer :

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

Q. 2 Answer :

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

Q. 3 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

Q. 4 Answer :

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

Q. 5 Answer :

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 :

$$\begin{array}{r} 26.900 \\ 19.740 \end{array}$$

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

Hence, the sum of the given decimals is 278.457

Q. 6 Answer :

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

Q. 7 Answer :

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

Q. 8 Answer :

Converting the given decimals into like decimals, we get :

9.090, 0.909, 99.900 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

Q. 9 Answer :

The given decimals like decimals. Write them a column from with the large one at the top and subtracting them, we get :

16.00, 8.70, 0.94, 6.80 and 7.77

$$72.43$$

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

$$\therefore (72.43 - 14.79) = 57.64$$

Q. 10 Answer :

Converting the given decimals into like decimals, we get :

36.74 and 52.60

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

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

$$\therefore (52.60 - 36.74) = 15.86$$

Q. 11 Answer :

Converting the given decimals into like decimals, we get :

13.876 and 22.000

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

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

$$\therefore (22.000 - 13.875) = 8.124$$

Q. 12 Answer :

Converting the given decimals into like decimals, we get :

15.079 and 24.160

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

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

$$\therefore (24.160 - 15.079) = 9.081$$

Q. 13 Answer :

Converting the given decimals into like decimals, we get :

0.680 and 1.007

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

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

$$\therefore (1.007 - 0.680) = 0.327$$

Q. 14 Answer :

Converting the given decimals into like decimals, we get :

0.4678 and 5.0500

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

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

$$\therefore (5.0500 - 0.4678) = 4.5822$$

Q. 15 Answer :

Converting the given decimals into like decimals, we get :

2.5307 and 8.0000

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

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

$$\therefore (8.0000 - 2.5307) = 5.4693$$

Q. 16 Answer :

Converting the given decimals into like decimals, we get :

9.001 and 6.732

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

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

$$\therefore (9.001 - 6.732) = 2.269$$

Q. 17 Answer :

Converting the given decimals into like decimals, we get :

0.680 and 1.007

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

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

$$\therefore (1.007 - 0.680) = 0.327$$

Q. 17 Answer :

Converting the given decimals into like decimals, we get :

5.746 and 9.100

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

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

$$\therefore (9.100 - 5.746) = 3.354$$

Q. 18 Answer :

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

Q. 19 Answer :

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

Q. 20 Answer :

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

Q. 21 Answer :

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 increased by 47.43 to get 26.87

Q. 22 Answer :

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

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Exercise 3C

Q. 1 Answer :

We have following :

(i) $73.92 \times 10 = 739.2$

(ii) $7.54 \times 10 = 75.4$

(iii) $84.003 \times 10 = 840.03$

(iv) $0.83 \times 10 = 8.3$

(v) $0.7 \times 10 = 7$

(vi) $0.032 \times 10 = 0.32$

Q. 2 Answer :

We have following :

(i) $2.397 \times 100 = 239.7$

(ii) $6.83 \times 100 = 683$

(iii) $2.9 \times 100 = 290$

(iv) $0.08 \times 100 = 8$

(v) $0.6 \times 100 = 60$

(vi) $0.003 \times 100 = 0.3$

Q. 3 Answer : We have

(i) $6.7314 \times 1000 = 6731.4$

(ii) $0.182 \times 1000 = 182$

(iii) $0.076 \times 1000 = 76$

(iv) $6.25 \times 1000 = 6250$

(v) $4.8 \times 1000 = 4800$

(vi) $0.06 \times 1000 = 60$

Q. 4 Answer : We have the following –

(i) $54 \times 16 = 864$

$$\therefore 5.4 \times 16 = 86.4 \quad (1 \text{ place of decimal})$$

(ii) $365 \times 19 = 6935$

$$\therefore 3.6 \times 19 = 69.35 \quad (2 \text{ place of decimal})$$

(iii) $854 \times 12 = 10248$

$$\therefore 0.854 \times 12 = 10.248 \quad (3 \text{ place of decimal})$$

(iv) $3673 \times 48 = 176304$

$$\therefore 36.78 \times 48 = 1763.04 \quad (2 \text{ place of decimal})$$

(v) $4125 \times 86 = 354750$

$$\therefore 4.125 \times 86 = 354.750 = 354.75 \quad (3 \text{ place of decimal})$$

Q. 5 Answer :

(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 = $(1 + 1) = 2$

$$\therefore 7.6 \times 2.4 = 18.24 \quad [2 \text{ places of decimal}]$$

(ii) First, we will multiply 345 by 63

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

$$\therefore 345 \times 63 = 21535$$

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

$$\therefore 3.45 \times 6.3 = 21.735 \quad [3 \text{ places of decimal}]$$

(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 = $(2 + 2) = 4$

$$\therefore 0.54 \times 0.27 = 0.1458 \quad [4 \text{ places of decimal}]$$

(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 = $(3 + 1) = 4$

$$\therefore 0.568 \times 4.9 = 2.7832 \quad [4 \text{ places of decimal}]$$

(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 = $(3 + 2) = 5$

$$\therefore 0.623 \times 0.75 = 0.46725 \quad [5 \text{ places of decimal}]$$

Q. 6 Answer :

- (i) First, we Find the product $13 \times 1.3 \times 0.13$

$$\text{Now, } 13 \times 13 \times 13 = 139 \times 13 = 2197$$

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

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

So, the product must have three decimal places.

$$\therefore 13 \times 1.3 \times 0.13 = 2.197$$

- (ii) First, we Find the product $2.4 \times 1.5 \times 2.5$

$$\text{Now, } 24 \times 15 \times 25 = 360 \times 25 = 9000$$

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

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

So, the product must have three decimal places.

$$\therefore 2.1 \times 0.21 \times 0.021 = 0.009261$$

- (iii) First, we Find the product $0.8 \times 3.5 \times 0.05$

$$\text{Now, } 8 \times 35 \times 5 = 280 \times 5 = 1400$$

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

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

So, the product must have three decimal places.

$$\therefore 0.8 \times 3.5 \times 0.05 = 0.1400 = .014$$

- (iv) First, we Find the product $0.24 \times 0.02 \times 0.002$

$$\text{Now, } 2 \times 2 \times 2 = 4 \times 2 = 8$$

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

So, the product must have three decimal places.

$$\therefore 0.2 \times 0.02 \times 0.002 = 0.000008$$

- (v) First, we Find the product $11.1 \times 1.1 \times 0.11$

$$\text{Now, } 111 \times 11 \times 11 = 1221 \times 11 = 13431$$

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

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

So, the product must have three decimal places.

$$\therefore 11.1 \times 1.1 \times 0.11 = 1.3431$$

Q. 7 Answer :

(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 two 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 two decimal places.

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

Q. 8 Answer :

(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 two decimal places.

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

(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 two 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 $15 \times 15 \times 15$

$$\text{Now, } 15 \times 15 \times 15 = 225 \times 15 = 3375$$

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

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

So, the product must have two decimal places.

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

Q. 9 Answer :

Distance covered by the bus in 1 hour = 62.5 km

$$\therefore \text{Distance covered in 18 hours} = (62.5 \times 18) \text{ km} = 1125 \text{ km}$$

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

Q. 10 Answer :

Weight of 1 tin of oil = 16.8 kg

$$\therefore \text{Weight of 45 such tins} = (16.8 \times 45) \text{ kg} = 756 \text{ kg}$$

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

Q. 11 Answer :

Weight of 1 bag of wheat = 97.8 kg

$$\therefore \text{Weight of 500 such bags} = (97.8 \times 500) \text{ kg} = 48900 \text{ kg}$$

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

Q. 12 Answer :

Weight of 1 bag of sugar = 48.450 kg

$$\therefore \text{Weight of 16 bags of sugar} = (48.450 \times 16) \text{ kg} = 775.2 \text{ kg}$$

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

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

Q. 13 Answer :

Capacity of 1 sauce bottle = 0.845 kg

$$\therefore \text{Capacity of 72 such bottles} = (0.845 \times 72) \text{ kg} = 60.84 \text{ kg}$$

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

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

Q. 14 Answer :

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

∴ Capacity of 25 such bottles = (0.925×25) kg = 23.125 kg

$$\begin{array}{r} 925 \\ \times 25 \\ \hline 6425 \\ 1850 \times \\ \hline 23125 \end{array}$$

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

Q. 15 Answer :

Capacity of 1 drum of oil = 16.850 litres

∴ Capacity of 48 such drums = (16.850×48) litres = 808.800 litres

$$\begin{array}{r} 16850 \\ \times 48 \\ \hline 134800 \\ 67400 \times \\ \hline 808800 \end{array}$$

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

Q. 16 Answer :

Capacity of 1 kg of rice = Rs 56.80

∴ cost of 16.25 kg of rice = Rs (56.80×16.25) = Rs 923

$$\begin{array}{r} 5680 \\ \times 1625 \\ \hline 28400 \\ 11360 \times \\ 34080 \times \times \\ 5680 \times \times \times \\ \hline 9230000 \end{array}$$

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

Q. 17 Answer :

Cost of 1 m of cloth = Rs 108.50

∴ Cost of 18.5 m of cloth = Rs (108.50×18.5) = Rs 2007.25

$$\begin{array}{r} 10850 \\ \times 185 \\ \hline 54250 \\ 86800 \times \\ 10850 \times \times \\ \hline 2007250 \end{array}$$

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

Q. 18 Answer :

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.

Q. 19 Answer :

Charge of 1 km = Rs 9.80

$$\therefore \text{Charge for 106.5 km} = (9.80 \times 106.5) = \text{Rs } 1043.70$$

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

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Exercises – 3D

Q. 1 Answer

We have the following :

$$(i) \quad 131.6 \div 10 = \frac{131.6}{10} = 13.16$$

$$(ii) \quad 32.56 \div 10 = \frac{32.56}{10} = 3.256$$

$$(iii) \quad 4.38 \div 10 = \frac{4.38}{10} = 0.438$$

$$(iv) \quad 0.08 \div 10 = \frac{0.08}{10} = 0.008$$

Q. 2 Answer :

We have the following :

$$(i) \quad 137.2 \div 100 = \frac{137.2}{100} = 1.372$$

$$(ii) \quad 23.4 \div 100 = \frac{23.4}{100} = 0.234$$

$$(iii) \quad 4.7 \div 100 = \frac{4.7}{100} = 0.047$$

$$(iv) \quad 0.3 \div 100 = \frac{0.3}{100} = 0.003$$

$$(v) \quad 0.58 \div 100 = \frac{0.58}{100} = 0.0058$$

Q. 3 Answer : We have the following

$$(i) \quad 1286.5 \div 1000 = \frac{1286.5}{1000} = 1.2865$$

$$(ii) \quad 354.16 \div 1000 = \frac{354.16}{1000} = 0.35416$$

$$(iii) \quad 38.9 \div 1000 = \frac{38.9}{1000} = 0.0389$$

$$(iv) \quad 6.5 \div 1000 = \frac{6.5}{1000} = 0.0065$$

$$(v) \quad 0.8 \div 1000 = \frac{0.8}{1000} = 0.0008$$

Q. 4 Answer :

$$(i) \quad 12 \div 8 = \frac{12}{8} = \frac{3}{2}$$

$$2 \overline{) 3} (1.5$$

$$\underline{- 2}$$

$$10$$

$$\underline{- 10}$$

$$\times$$

$$\therefore 12 \div 8 = 1.5$$

$$(ii) \quad 63 \div 15 = \frac{63}{15} = \frac{21}{5}$$

$$5 \overline{) 21} (4.2$$

$$\underline{- 20}$$

$$10$$

$$\underline{- 10}$$

$$\times$$

$$\therefore 63 \div 15 = 4.2$$

(iii) $47 \div 20 = \frac{47}{20}$

$$\begin{array}{r} 20 \overline{) 47} (2.35 \\ \underline{- 40} \\ 70 \\ \underline{- 60} \\ 100 \\ \underline{- 100} \\ \times \end{array}$$

$$\therefore 47 \div 20 = 2.35$$

(iv) $101 \div 25 = \frac{101}{25}$

$$\begin{array}{r} 25 \overline{) 101} (4.04 \\ \underline{- 100} \\ 100 \\ \underline{- 100} \\ \times \end{array}$$

$$\therefore 101 \div 25 = 4.04$$

(v) $31 \div 40$

$$\begin{array}{r} 0.775 \\ 40 \overline{) 3100} \\ \underline{- 0} \\ 31 \\ \underline{- 28} \\ 30 \\ \underline{- 28} \\ 20 \\ \underline{- 20} \\ \times \end{array}$$

$$\therefore 31 \div 40 = 0.775$$

Q. 5 Answer :

(i) We have

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

$$\therefore 43.2 \div 6 = 7.2$$

(ii) We have

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

$$\therefore 60.48 \div 12 = 5.4$$

(iii) We have

$$117.6 \div 21$$

$$\begin{array}{r}
 21 \overline{) 1176} \text{ (5.6} \\
 \underline{- 105} \\
 126 \\
 \underline{- 126} \\
 \times \\
 \therefore 117.6 \div 21 = 5.6
 \end{array}$$

(iv) We have

$$\begin{array}{r}
 217.44 \div 18 \\
 18 \overline{) 217.44} \text{ (12.08} \\
 \underline{- 18} \\
 37 \\
 \underline{- 36} \\
 144 \\
 \underline{- 144} \\
 \times \\
 \therefore 217.44 \div 18 = 12.08
 \end{array}$$

(v) We have

$$\begin{array}{r}
 2.575 \div 25 \\
 25 \overline{) 2.575} \text{ (0.103} \\
 \underline{- 0} \\
 25 \\
 \underline{- 25} \\
 \times 7 \\
 \underline{- 0} \\
 75 \\
 \underline{- 75} \\
 \times \\
 \therefore 2.575 \div 25 = 0.103
 \end{array}$$

Q. 6 Answer :

$$(i) 16.46 \div 20 = \frac{16.46}{20} = \frac{16.40 \times 100}{20 \times 100} = \frac{1640}{2 \times 1000} = \frac{820}{1000} = 0.82$$

$$(ii) 403.8 \div 30 = \frac{403.8}{30} = \frac{400.3 \times 10}{30 \times 10} = \frac{4003}{3 \times 100} = \frac{1334}{100} = 13.34$$

$$(iii) 19.2 \div 80 = \frac{19.2}{80} = \frac{19.2 \times 10}{80 \times 10} = \frac{192}{800} = \frac{192}{8 \times 100} = \frac{24}{100} = 0.24$$

$$(iv) 156.8 \div 200 = \frac{156.8}{200} = \frac{156.8 \times 10}{200 \times 10} = \frac{1568}{2000} = \frac{1568}{2 \times 1000} = \frac{784}{1000} = 0.784$$

$$(v) 12.8 \div 500 = \frac{12.8}{500} = \frac{12.8 \times 10}{500 \times 10} = \frac{128}{5000} = \frac{128}{5 \times 1000} = \frac{25.6}{1000} = 0.0256$$

Q. 7 Answer :

$$(i) 3.28 \div 0.08 = \frac{3.28}{0.8} = \frac{3.28 \times 10}{0.8 \times 10} = \frac{32.8}{8}$$

Now, we have :

$$\begin{array}{r}
 8 \overline{) 32.8} \text{ (4.1} \\
 \underline{- 32} \\
 \times 8 \\
 \underline{- 8} \\
 \times \\
 \therefore \frac{3.28}{0.8} = \frac{32.8}{8} = 4.1
 \end{array}$$

$$(ii) 0.288 \div 0.9 = \frac{0.288}{0.9} = \frac{0.288 \times 10}{0.9 \times 10} = \frac{2.88}{9}$$

Now, we have :

$$9 \overline{) 2.88} (0.32$$

$$\begin{array}{r} - 0 \\ \hline 28 \\ - 27 \\ \hline 18 \\ - 18 \\ \hline \end{array}$$

$$\therefore \frac{0.288}{0.9} = \frac{2.88}{9} = 0.32$$

$$(iii) \quad 23.395 \div 1.5 = \frac{25.395}{1.5} = \frac{25.395 \times 10}{1.5 \times 10} = \frac{253.95}{15}$$

Now, we have :

$$15 \overline{) 253.95} (16.93$$

$$\begin{array}{r} - 15 \\ \hline 103 \\ - 90 \\ \hline 139 \\ - 135 \\ \hline 45 \\ - 45 \\ \hline \end{array}$$

$$\therefore \frac{25.395}{1.5} = \frac{253.95}{15} = 16.93$$

$$(iv) \quad 2.0484 \div 0.18 = \frac{25.395}{1.5} = \frac{25.395 \times 10}{1.5 \times 10} = \frac{253.95}{15}$$

Now, we have :

$$15 \overline{) 253.95} (16.93$$

$$\begin{array}{r} - 15 \\ \hline 103 \\ - 90 \\ \hline 139 \\ - 135 \\ \hline 45 \\ - 45 \\ \hline \end{array}$$

$$\therefore \frac{25.395}{1.5} = \frac{253.95}{15} = 16.93$$

$$(v) \quad 0.228 \div 0.38 = \frac{0.228}{0.38} = \frac{0.228 \times 100}{0.38 \times 100} = \frac{22.8}{38}$$

Now, we have :

$$38 \overline{) 22.8} (0.6$$

$$\begin{array}{r} - 0 \\ \hline 228 \\ - 228 \\ \hline \end{array}$$

$$\therefore \frac{0.228}{0.38} = \frac{22.8}{38} = 0.6$$

Q. 9 Answer :

Cloth required for 1 shirts = 1.8 m

$$\therefore \text{Number of shirts that can be made from 45 m of cloth} = \frac{45}{1.8} = \frac{15}{0.6} = \frac{5}{0.2} = \frac{50}{2} = 25$$

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

Q. 10 Answer :

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

$$\therefore \text{Distance covered with 1 litre petrol} = \left(\frac{22.8}{2.4}\right) \text{ km} = \left(\frac{228}{24}\right) \text{ km} = \left(\frac{228 \div 12}{24 \div 12}\right) \text{ km} = \left(\frac{19}{2}\right) \text{ km} = 9\frac{1}{2} \text{ km}$$

Hence, the distance covered by the car with 1 litre of petrol is $9\frac{1}{2}$ km

Q. 11 Answer :

Capacity of 1 tin of oil = 16.5 litres

$$\therefore \text{Number of tin required to hold 178.5 litres of oil} = \left(\frac{478.5}{16.5}\right) = \left(\frac{4785}{165}\right) = \left(\frac{4785 \div 15}{165 \div 15}\right) = \frac{319}{11} = 29$$

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

Q. 12 Answer :

Weight of 37 bags of sugar = 3644.5 kg

$$\therefore \text{Weight of 1 bag of sugar} = \left(\frac{3644.5}{37}\right) = 98.5 \text{ kg}$$

$$\begin{array}{r} 37 \overline{) 3644.5} \quad (98.5 \\ - 333 \\ \hline 314 \\ - 296 \\ \hline 185 \\ - 185 \\ \hline \times \end{array}$$

Hence, each bag of sugar weights 98.5 kg.

Q. 13 Answer :

Capacity of 69 buckets of water = 586.5 litres

$$\therefore \text{Capacity of one such bucket} = \left(\frac{586.5}{69}\right) = 8.5 \text{ litres}$$

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

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

Q. 14 Answer :

Length of one piece of cloth = 1.15 m

$$\therefore \text{Number of pieces she gets from 46 m of cloth} = \left(\frac{46}{1.15}\right) = \left(\frac{46 \times 100}{1.15 \times 100}\right) = \left(\frac{4600}{115}\right) = 40$$

Hence, Monica has 40 pieces of clothes each of length 1.15 m

Q. 15 Answer :

Total weight of all bags of cement = 1792.8 kg

Weight of each bag = 49.8 kg

$$\text{Number of bags} = \left(\frac{\text{Total weight}}{\text{Weight of each bag}}\right) = \left(\frac{1792.8}{49.8}\right) = \left(\frac{17928}{498}\right) = 36$$

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

Hence, Mr. soni bought 36 bags of cement.

Q. 16 Answer :

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

Thickness of one piece of plywood = 0.35 cm

$$\therefore \text{Required number of plywood pieces} = \left(\frac{189}{0.35}\right) = \left(\frac{189 \times 100}{0.35 \times 100}\right) = \left(\frac{18900}{35}\right) = 540$$

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

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

Q. 17 Answer :

Product of the given decimals = 261.36

One decimal = 17.6

The other decimal = $261.36 \div 17.6 = \left(\frac{261.36}{17.6}\right) = \left(\frac{261.36 \times 10}{17.6 \times 10}\right) = \left(\frac{2613.6}{176}\right) = 14.85$

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

Hence, the other decimal is 14.85

Exercises – 3E

Q. 1 Answer

(b) $\frac{3}{50}$

$$0.06 = \frac{6}{100} = \frac{3}{50}$$

Q. 2 Answer :

(c) $1\frac{1}{25}$

$$1.04 = \frac{104}{100} = \frac{26}{25} = 1\frac{1}{25}$$

Q. 3 Answer :

(b) 2.08

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

On dividing, we get :

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

Q. 4 Answer :

(c) 0.00006 km

$$6 \text{ cm} = \frac{6}{100} \text{ m} = 0.06 \text{ m}$$

$$0.06 \text{ m} = \frac{0.06}{1000} \text{ km} = 0.00006 \text{ km}$$

$$\therefore 6 \text{ cm} = 0.00006 \text{ km}$$

Q. 5 Answer :

(b) 0.07 kg

$$70 \text{ g} = \frac{70}{1000} \text{ kg} = \frac{7}{100} \text{ kg} = 0.07 \text{ kg}$$

$$\therefore 70 \text{ g} = 0.07 \text{ kg}$$

Q. 6 Answer :

(c) 5.006 kg

$$5 \text{ kg } 6 \text{ g} = (5 \times 1000) \text{ g} + 6 \text{ g} = 5006 \text{ g} = \frac{5006}{1000} \text{ kg} = 5.006 \text{ kg}$$

$$\therefore 5 \text{ kg } 6 \text{ g} = 5.006 \text{ kg}$$

Q. 7 Answer :

(c) 2.005 km

$$2 \text{ km } 5 \text{ m} = (2 \times 1000) \text{ m} + 5 \text{ m} = 2005 \text{ m} = \frac{2005}{1000} \text{ km} = 2.005 \text{ km}$$

$$\therefore 2 \text{ km } 5 \text{ m} = 2.005 \text{ km}$$

Q. 8 Answer :

(c) 0.307

Converting the given decimals into like decimals, we get :

1.007 and 0.700

Writing them in column from 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

Q. 9 Answer :

(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 from 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

Q. 10 Answer :

(c) .43

$$\text{We have } 3.07 - x = 3.5$$

$$\Rightarrow x = 3.5 - 3.07$$

Converting the given decimals into like decimals, we get : 3.07 and 3.50

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

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

$$\therefore x = .043$$

Hence, 0.43 Should be added to 3.07 to get 3.5

Q. 11 Answer

(c) 0.069

First, we will multiply 23 by 3

$$\text{i.e. } 23 \times 3 = 69$$

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

$$\therefore 2.30 \times 0.3 = 0.069 = 0.69 \quad (\text{3 places of decimals})$$

Q. 12 Answer

(b) 0.06

We have : $2 \times 30 = 60$

$$\therefore 0.02 \times 30 = 0.60 = 0.6 \quad (\text{2 places of decimals})$$

Q. 13 Answer

(b) 0.02

First, we will multiply 25 by 8

$$\therefore 25 \times 8 = 200$$

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

$$\therefore 0.25 \times 0.8 = 0.200 = 0.2 \quad (\text{3 places of decimals})$$

Q. 14 Answer

(c) 0.64

First, we will find the product $4 \times 4 \times 4 = 64$

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

$$\therefore 0.4 \times 0.4 \times 0.4 = 0.064 \quad (\text{3 places of decimal})$$

Q. 15 Answer :

(b) .0011

First, we will find the product $11 \times 1 \times 1$.

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

$$\therefore 1.1 \times 0.1 \times 0.01 = 0.0011 \quad (\text{4 places of decimal})$$

Q. 16 Answer :

(a) 13

$$2.08 \div 0.16 = \frac{2.08}{0.16} = \frac{2.08 \times 100}{0.16 \times 100} = \frac{208}{16} = 13$$

Q. 17 Answer :

(b) 0.17

$$1.02 \div 6 = \frac{1.02}{6} = \frac{1.02 \times 100}{6 \times 100} = \frac{102}{600} = \frac{17}{100} = 0.17$$

Q. 18 Answer :

(a) 44.2

$$30.94 \div 0.7 = \frac{30.94}{0.7} = \frac{30.94 \times 100}{0.7 \times 100} = \frac{3094}{70} = 44.2$$

Q. 19 Answer :

(b) 2.1

$$2.73 \div 1.3 = \frac{2.73}{1.3} = \frac{2.73 \times 100}{1.3 \times 100} = \frac{273}{130} = \frac{21}{10} = 2.1$$

Q. 20 Answer :

(a) 40.5

$$89.1 \div 2.2 = \frac{89.1}{2.2} = \frac{89.1 \times 10}{2.2 \times 10} = \frac{891}{22} = 40.5$$

Q. 21 Answer :

(c) 0.025

First, we will multiply 5 by 5

$$\text{i.e. } 5 \times 5 = 25$$

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

$$\therefore 0.5 \times 0.5 = 0.025 \quad (\text{3 places of decimal})$$

