

Decimals

Exercise 3E

Q1

Answer :

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

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

Q2

Answer :

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

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

Q3

Answer :

(b) 2.08

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

On dividing, we get:

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

$$\therefore 2\frac{2}{25} = \frac{52}{25} = 2.08$$

Q4

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Answer :

(c) 0.00006 km

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

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

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

Q5

Answer :

(b) 0.07 kg

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

$$= 0.07 \text{ kg}$$

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

Q6

Answer :

(c) 5.006 kg

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

$$= \frac{5006}{1000} \text{ kg} = 5.006 \text{ kg}$$

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

Q7

Answer :

(c) 2.005 km

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

$$= \frac{2005}{1000} \text{ km} = 2.005 \text{ km}$$

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

Q8

Answer :

(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.

Q9

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 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.

Q10

Answer :

(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.

Q11

Answer :

(c) 0.069

First, we will multiply 23 by 3.

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

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

$$\therefore 0.23 \times 0.3 = 0.069 \quad (3 \text{ places of decimal})$$

Q12

Answer :

(b) 0.6

We have:

$$2 \times 30 = 60$$

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

Q13

Answer :

(b) 0.2

First, we will multiply 25 by 8.

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

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

$$\therefore 0.25 \times 0.8 = 0.200 \quad [3 \text{ places of decimal}]$$
$$= 0.2$$

Q14

Answer :

(c) .064

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

$$\text{Sum of decimal places in the given decimals} = (1 + 1 + 1) = 3$$

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

Q15

Answer :

(b) .0011

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

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

$\therefore 1.1 \times 0.1 \times 0.01 = 0.0011$ (4 places of decimal)

Q16

Answer :

(a) 13

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

Q17

Answer :

(b) 0.17

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

Q18

Answer :

(a) 44.2

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

Q19

Answer :

(b) 2.1

$$2.73 \div 1.3 = \frac{2.73}{1.3} = \frac{2.73 \times 100}{1.3 \times 100} = \frac{273}{13 \times 10} = \frac{21}{10} = 2.1$$

Q20

Answer :

(a) 40.5

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

Q21

Answer :

(c) 0.025

First, we will multiply 5 by 5.

i.e., $5 \times 5 = 25$

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

$\therefore 0.5 \times 0.05 = 0.025$ (3 places of decimal)