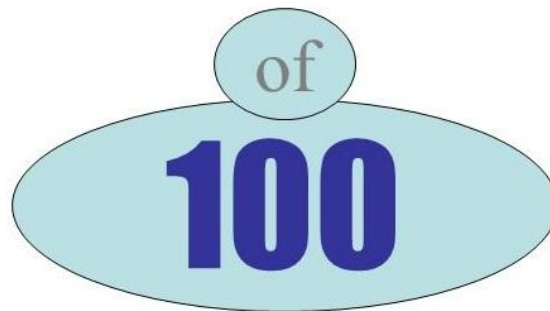


Percentage

Ex 9A

Definition

Percent can be defined as
"of one hundred."



PERCENTAGE:

$$\frac{x}{n} \times 100 = p$$

where:

x = given quantity

n = total amount

p = percentage of the quantity
compared to the total

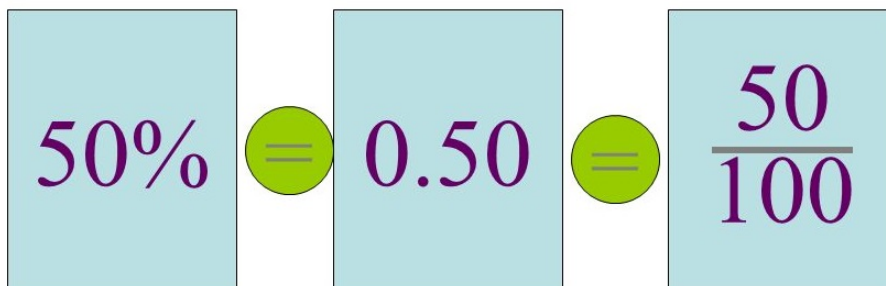
$$\text{Percentage increase} = \frac{\text{actual increase}}{\text{original amount}} \times 100\%$$

$$\text{Percentage decrease} = \frac{\text{actual decrease}}{\text{original amount}} \times 100\%$$

Percent

Decimal

Fraction



$$60\% = \frac{60}{100} = 0.6$$

Percent means "per one hundred", so to convert a percent to a fraction, divide it by 100.

Q1

Answer :

$$\begin{aligned} \text{(i) } 48\% &= \frac{48}{100} \\ &= \frac{12}{25} \end{aligned}$$

$$\begin{aligned} \text{(ii) } 220\% &= \frac{220}{100} \\ &= \frac{11}{5} \end{aligned}$$

$$\begin{aligned} \text{(iii) } 2.5\% &= \frac{2.5}{100} \\ &= \frac{25}{10000} \\ &= \frac{1}{400} \end{aligned}$$

Q2

Answer :

$$\text{(i) } 6\% = \frac{6}{100} = 0.06$$

$$\text{(ii) } 72\% = \frac{72}{100} = 0.72$$

$$\text{(iii) } 125\% = \frac{125}{100} = 1.25$$

Q3

Answer :

$$\begin{aligned} \text{(i) } \frac{9}{25} &= \left(\frac{9}{25} \times 100 \right)\% \\ &= (9 \times 4)\% \\ &= 36\% \end{aligned}$$

$$\begin{aligned} \text{(ii) } \frac{3}{125} &= \left(\frac{3}{125} \times 100 \right)\% \\ &= 2.4\% \end{aligned}$$

$$\begin{aligned} \text{(iii) } \frac{12}{5} &= \left(\frac{12}{5} \times 100 \right)\% \\ &= 240\% \end{aligned}$$

Q4

Answer :

$$4 : 5 = \frac{4}{5} = \left(\frac{4}{5} \times 100\right)\% \\ = 80\%$$

Q5

Answer :

$$125\% \\ = \frac{125}{100} \\ = \frac{5}{4} = 5 : 4$$

Q6

Answer :

We have :

$$6\frac{2}{3}\% = \frac{20}{3}\% \\ = \left(\frac{20}{3} \times \frac{1}{100}\right) \\ = \frac{1}{15} \\ = 0.06$$

$$\text{Also, } \frac{3}{20} = 0.15$$

The third number is 0.14.

Clearly, 0.15 is the largest.

Hence, $\frac{3}{20}$ is the largest.

Q7

Answer :

$$(i) \text{ Required percentage} = \left(\frac{96}{150} \times 100\right)\% = 64\%$$

$$(ii) \text{ Required percentage} = \left(\frac{200}{5 \times 1000} \times 100\right)\% = 4\%$$

$$(iii) \text{ Required percentage} = \left(\frac{250}{2 \times 1000} \times 100\right)\% = 12.5\%$$

Q8

Answer :

$$4\frac{1}{2}\% = \frac{9}{2 \times 100}$$

$$\therefore \frac{9}{200} \text{ of Rs } 3600 = \frac{9}{200} \times 3600 = \text{Rs } 162$$

Q9

Answer :

Let the number be x .

16% of x is 72.

$$\Rightarrow \frac{16}{100} \times x = 72$$

$$\Rightarrow 16x = 72 \times 100$$

$$\Rightarrow 16x = 7200$$

$$\Rightarrow x = \frac{7200}{16} = 450$$

\therefore The required number is 450.

Q10

Answer :

Let Rs x be his monthly income.

His savings = 18% of Rs x

$$= \text{Rs} \left(x \times \frac{18}{100} \right)$$

$$= \text{Rs} \frac{9x}{50}$$

Now, $\frac{9x}{50} = 1890$

$$\Rightarrow x = \text{Rs} \left(1890 \times \frac{50}{9} \right)$$

$$\Rightarrow x = \text{Rs} 10500$$

\therefore His monthly income is Rs.10500.

Q11

Answer :

Let x be the total number of games played.

Percentage of games won = 35% of x

$$= \left(x \times \frac{35}{100} \right)$$

$$= \frac{35x}{100}$$

Now, $\frac{35x}{100} = 7$

$$\Rightarrow x = \left(7 \times \frac{100}{35} \right)$$

$$\Rightarrow x = 20$$

\therefore The total number games played is 20.

Q12

Answer :

Let Rs x be Amit's old salary.

His salary after increment will be Rs $\left(x + \frac{20}{100} x \right)$

According to the question, we have :

$$\Rightarrow x + \frac{20}{100} x = 15300$$

$$\Rightarrow \frac{100x + 20x}{100} = 15300 \quad (\text{LCM} = 100)$$

$$\Rightarrow \frac{120x}{100} = 15300$$

$$\Rightarrow 120x = 15300 \times 100$$

$$\Rightarrow x = \frac{15300 \times 100}{120}$$

$$\Rightarrow x = 12750$$

\therefore The old salary is Rs 12,750.

Q13

Answer :

Let x be the number of days the school was opened.

Number of days Sonal attended school = 204 days

Percentage of her attendance = 85% of x

$$= \left(x \times \frac{85}{100} \right)$$

$$= \frac{85x}{100}$$

Now, $\frac{85x}{100} = 204$

$$\Rightarrow x = \left(204 \times \frac{100}{85} \right)$$

$$\Rightarrow x = 240$$

\therefore The school was opened for 240 day.

Q14

Answer :

Let B's income be Rs 100

Then, A's income = Rs 80

Therefore, B's income is more than A's income by = $\frac{(100-80)}{80} \times 100\%$

$$= \frac{20}{80} \times 100\% = 25\%$$

$$= \text{Rs}125$$

\therefore B's income is more than that of A's by (125 – 100)%, i.e., 25%.

Q15

Answer :

Let the consumption of petrol originally be 1 unit and let its cost be Rs 100.

New cost of 1 unit of petrol = Rs 110

Now, Rs 110 will yield 1 unit of petrol.

i.e., Rs 100 will yield $\left(\frac{1}{110} \times 100\right)$, i.e., $\frac{10}{11}$ units of petrol.

Now, reduction in consumption = $\left(1 - \frac{10}{11}\right) = \frac{1}{11}$ unit

Percentage of reduction = $\left(\frac{1}{11} \times \frac{1}{1} \times 100\right)\% = 9\frac{1}{11}\%$

∴ A motorist must reduce the consumption of petrol by $9\frac{1}{11}\%$.

Q16

Answer :

Let x be the population of the town a year ago. Then, present population = 108% of x

$$= \left(x \times \frac{108}{100}\right) = \frac{27x}{25}$$

$$\text{Now, } \frac{27x}{25} = 54000 \quad \Rightarrow x = \left(54000 \times \frac{25}{27}\right) \quad \Rightarrow x = 50000$$

Hence, the population of the town a year ago was 50000.

Q17

Answer :

Let Rs x be the value of the machine last year.

Then, present value = 80% of Rs x

$$= \text{Rs} \left(x \times \frac{80}{100}\right)$$

$$= \text{Rs} \frac{4x}{5}$$

$$\text{Now, } \frac{4x}{5} = 160000$$

$$\Rightarrow x = \left(160000 \times \frac{5}{4}\right)$$

$$\Rightarrow x = 40000 \times 5 = 200000$$

Hence, the value of the machine last year was Rs 2,00,000.

Q18

Answer :

Mass of the alloy = 1 kg

Percentage of copper = 40%

Percentage of nickel = 32%

Percentage of zinc = $\{100 - (40 + 32)\}\%$

$$= 28\%$$

∴ Mass of zinc in 1 kg of alloy = $\left(\frac{28}{100} \times 1\right)$ kg

$$= 0.28 \text{ kg} = 0.28 \times 1000 \text{ g} = 280 \text{ g}$$

Q19

Answer :

Amount of protein = 12% of 2600

$$= \left(2600 \times \frac{12}{100}\right)$$

$$= 312 \text{ cal}$$

Amount of fat = 25% of 2600

$$= \left(2600 \times \frac{25}{100}\right)$$

$$= 650 \text{ cal}$$

Amount of carbohydrate = 63% of 2600

$$= \left(2600 \times \frac{63}{100}\right)$$

$$= 1638 \text{ cal}$$

Q20

Answer :

Let x be the amount of gunpowder.

Amount of nitre = 75%

Let x kg be the amount of gunpowder containing 9 kg of nitre.

i. e., (75% of x) = 9 kg

$$\Rightarrow \left(x \times \frac{75}{100}\right) = 9$$

$$\Rightarrow \frac{75x}{100} = 9$$

$$\Rightarrow x = \left(9 \times \frac{100}{75}\right)$$

$$\Rightarrow x = 12 \text{ kg}$$

Hence, 12 kg of gunpowder contains 9 kg of nitre.

Now, amount of sulphur = 10%

Let x kg be the amount of gunpowder containing 2.5 kg of sulphur.

i. e., (10% of x) = 2.5 kg

$$\Rightarrow \left(x \times \frac{10}{100}\right) = 2.5$$

$$\Rightarrow \frac{10x}{100} = 2.5$$

$$\Rightarrow \frac{x}{10} = 2.5$$

$$\Rightarrow x = (2.5 \times 10)$$

$$\Rightarrow x = 25 \text{ kg}$$

Hence, 25 kg of gunpowder contains 2.5 kg of sulphur.

Q21

Let Rs x be the amount of money received by C.

Then, amount of money B gets = (50% of Rs x)

Amount of money A gets = (50% of B)
= (25% of Rs x)

Now, $x + (50\% \text{ of Rs } x) + (25\% \text{ of Rs } x) = \text{Rs } 7000$

$$\Rightarrow x + \left(x \times \frac{50}{100}\right) + \left(x \times \frac{25}{100}\right) = \text{Rs } 7000$$

$$\Rightarrow x + \frac{50x}{100} + \frac{25x}{100} = \text{Rs } 7000$$

$$\Rightarrow \left(x + \frac{50x}{100} + \frac{25x}{100}\right) = \text{Rs } 7000$$

$$\Rightarrow \frac{175x}{100} = \text{Rs } 7000$$

$$\Rightarrow x = \text{Rs } \left(7000 \times \frac{100}{175}\right)$$

$$\Rightarrow x = \text{Rs } 4000$$

\therefore C gets Rs 4000.

Amount of money B gets = (50% of Rs x)

$$= (50\% \text{ of Rs } 4000)$$

$$= \text{Rs } \left(4000 \times \frac{50}{100}\right)$$

$$= \text{Rs } 2000$$

Amount of money A gets = (25% of Rs x)

$$= (25\% \text{ of Rs } 4000)$$

$$= \text{Rs } \left(4000 \times \frac{25}{100}\right)$$

$$= \text{Rs } 1000$$

Q22

Answer :

22 carat gold contains 22 parts pure gold out of 24 parts.

Also, 24 carat gold is given to be 100% pure.

\therefore Percentage of pure gold in 22 carat gold = $\left(\frac{22}{24} \times 100\right)\%$

$$= 91\frac{2}{3}\%$$

Hence, 22 carat gold contains $91\frac{2}{3}\%$ of pure gold.

Q23.

Answer :

Let the original salary be Rs 100

Then, after increment of 25% the salary becomes

$$= 100\left(1 + \frac{25}{100}\right) = 100\left(\frac{125}{100}\right) = \mathbf{Rs\ 125}$$

To restore the original salary, let the new salary be decreased by $x\%$.

Thus, we get

$$125\left(1 - \frac{x}{100}\right) = 100$$

$$\Rightarrow \left(1 - \frac{x}{100}\right) = \frac{100}{125} = \frac{4}{5}$$

$$\Rightarrow \frac{x}{100} = \frac{1}{5}$$

$$\Rightarrow x = \frac{100}{5} = 20\%$$

Therefore, the new salary must be reduced by 20% to restore the original salary.

Percentage

Ex 9B

Q1.

Answer :

(d) 60%

$$\begin{aligned}\frac{3}{5} &= \left(\frac{3}{5} \times 100\right)\% \\ &= 60\%\end{aligned}$$

Q2.

Q3.

Answer :

(c) 120%

$$\begin{aligned}6 : 5 &= \frac{6}{5} \\ &= \left(\frac{6}{5} \times 100\right)\% \\ &= 120\%\end{aligned}$$

Q4.

Answer :

(d) 180

Let x be the required number. Then, we have :

$$5\% \text{ of } x = 9$$

$$\Rightarrow \left(x \times \frac{5}{100}\right) = 9$$

$$\Rightarrow \frac{5x}{100} = 9$$

$$\Rightarrow x = \left(9 \times \frac{100}{5}\right)$$

$$\Rightarrow x = 180$$

Q5.

Answer :

(c) $133\frac{1}{3}\%$

$$\begin{aligned}\text{Required percentage} &= \left(\frac{120}{90} \times 100\right)\% \\ &= 133\frac{1}{3}\%\end{aligned}$$

Q6.

Answer :

(d) 2.5%

$$\text{Required percentage} = \left(\frac{250}{10 \times 1000} \times 100\right)\% = 2.5\%$$

Q7

Answer :

(b) 600

Let the required number be x . Then, we have :

$$40\% \text{ of } x = 240$$

$$\Rightarrow \left(x \times \frac{40}{100}\right) = 240$$

$$\Rightarrow \frac{40x}{100} = 240$$

$$\Rightarrow x = \left(240 \times \frac{100}{40}\right)$$

$$\Rightarrow x = 600$$

Q8

Answer :

(c) 15

Let the required number be x . Then, we have :

$$x\% \text{ of } 400 = 60$$

$$\Rightarrow \left(400 \times \frac{x}{100}\right) = 60$$

$$\Rightarrow \frac{400x}{100} = 60$$

$$\Rightarrow 4x = 60$$

$$\Rightarrow x = \frac{60}{4}$$

$$\Rightarrow x = 15$$

Q9

Answer :

(d) 560

Let the required number be x . Then, we have :

$$(180\% \text{ of } x) \div 2 = 504$$

$$\Rightarrow \left(x \times \frac{180}{100}\right) \div 2 = 504$$

$$\Rightarrow \left(\frac{180x}{100}\right) \div 2 = 504$$

$$\Rightarrow \left(\frac{180x}{100} \times \frac{1}{2}\right) = 504$$

$$\Rightarrow \frac{9x}{10} = 504$$

$$\Rightarrow x = \left(504 \times \frac{10}{9}\right)$$

$$\Rightarrow x = 560$$

Q10

Answer :

(a) Rs 160

$$\begin{aligned}20\% \text{ of Rs } 800 &= \text{Rs } \left(800 \times \frac{20}{100}\right) \\ &= \text{Rs } 160\end{aligned}$$

Q11

Answer :

(c) 175

Let the maximum marks be x . Then, we have :

$$\begin{aligned} 56\% \text{ of } x &= \left(x \times \frac{56}{100}\right) \\ &= \frac{56x}{100} \\ \text{Now, } \frac{56x}{100} &= 98 \\ \Rightarrow x &= \left(98 \times \frac{100}{56}\right) \\ \Rightarrow x &= 175 \end{aligned}$$

Q12.

Answer :

(b) decrease by 1 %

Let x be the number.

A 10% increase will give a new number, $\frac{110}{100}x = \frac{11}{10}x$

The number is then reduced by 10%.

The new number will be $\frac{90}{100} \left(\frac{11}{10}x\right) = \frac{990}{1000}x = \frac{99}{100}x$

Difference = $x - \frac{99}{100}x = \frac{1}{100}x$

Percentage of decrease = $\frac{1}{100}x \times \frac{1}{x} \times 100 = 1\%$

Q13.

Answer :

(a) $18\frac{3}{4}\%$

$$\begin{aligned} 4 \text{ h } 30 \text{ min} &= (4 \times 60 \times 60) + (30 \times 60) \\ &= 16200 \text{ sec} \end{aligned}$$

$$\begin{aligned} 24 \text{ h} &= (24 \times 60 \times 60) \\ &= 86400 \text{ sec} \end{aligned}$$

$$\text{Now, } \left(\frac{16200}{86400} \times 100\right)\% = 18\frac{3}{4}\%$$

Q14.

Answer :

(c) 1200

Let x be the total number of examinees.

Percentage of the examinees passed = 65%

Percentage of the examinees failed = 35%

Number of the examinees failed = (35% of x)

$$\begin{aligned} &= \left(x \times \frac{35}{100}\right) \\ &= \frac{35x}{100} \end{aligned}$$

$$\text{Now, } \frac{35x}{100} = 420$$

$$\Rightarrow x = \left(420 \times \frac{100}{35}\right)$$

$$\Rightarrow x = 1200$$

Q15.

Answer :

(a) 50

Let x be the required number. Then, we have :

$$20\% \text{ of } x + 40 = x$$

$$\Rightarrow \left(x \times \frac{20}{100}\right) + 40 = x$$

$$\Rightarrow \frac{20x}{100} + 40 = x$$

$$\Rightarrow \left(\frac{20x}{100} - x\right) = -40$$

$$\Rightarrow \frac{-80x}{100} = -40$$

$$\Rightarrow x = \left(40 \times \frac{100}{80}\right)$$

$$\Rightarrow x = 50$$

Q16.

Answer :

(c) 120

Let the required number be x . Then, we have :

$$x - \left(27\frac{1}{2}\% \text{ of } x\right) = 87$$

$$\Rightarrow x - \left(\frac{55}{2}\% \text{ of } x\right) = 87$$

$$\Rightarrow x - \left(x \times \frac{55}{2} \times \frac{1}{100}\right) = 87$$

$$\Rightarrow x - \frac{11x}{40} = 87$$

$$\Rightarrow \frac{29x}{40} = 87$$

$$\Rightarrow x = \left(87 \times \frac{40}{29}\right)$$

$$\Rightarrow x = 120$$

Q17.

Answer :

(c) 0.25%

$$\text{Required percentage} = \left(\frac{0.05}{20} \times 100\right)\% = 0.25\%$$

Q18.

Answer :

(d) 300%

$$\text{Required percentage} = \left(\frac{1206}{3} \times \frac{1}{134} \times 100\right)\% = 300\%$$

Q19.

Answer :

(a) x

Let the required number be z . Then, we have :

$$x\% \text{ of } y = y\% \text{ of } z$$

$$\Rightarrow \left(y \times \frac{x}{100}\right) = \left(z \times \frac{y}{100}\right)$$

$$\Rightarrow \frac{yx}{100} = \frac{zy}{100}$$

$$\Rightarrow z = \left(\frac{yx}{100} \times \frac{100}{y}\right)$$

$$\Rightarrow z = x$$

Q20.

Answer :

(a) x

$$\text{Required percentage} = \left(\frac{1}{35} \times \frac{7}{2} \times 100\right)\% = 10\%$$

Percentage

Ex 9C

Q1.

Answer :

$$(i) 24\% = \frac{24}{100} \\ = \frac{6}{25}$$

$$(ii) 105\% = \frac{105}{100} \\ = 1.05$$

$$(iii) 4 : 5 = \frac{4}{5} \\ = \left(\frac{4}{5} \times 100\right)\% \\ = 80\%$$

$$(iv) 56\% = \frac{56}{100} \\ = \frac{14}{25} \\ = 14 : 25$$

Q2.

Answer :

Let the required number be x . Then, we have :

$$(34\% \text{ of } x) = 85$$

$$\Rightarrow \left(x \times \frac{34}{100}\right) = 85$$

$$\Rightarrow \frac{34x}{100} = 85$$

$$\Rightarrow x = \left(85 \times \frac{100}{34}\right)$$

$$\Rightarrow x = 250 \text{ Hence, the required number is 250.}$$

Q3.

Answer :

Let the value of the machine last year be Rs x .

Then, its present value = 90% of Rs x

$$= Rs \left(x \times \frac{90}{100}\right)$$

$$= Rs \frac{90x}{100}$$

$$\text{Now, } \frac{90x}{100} = 54000$$

$$\Rightarrow x = \left(54000 \times \frac{100}{90}\right)$$

$$\Rightarrow x = Rs 60000$$

Hence, the value of the machine last year was Rs 60,000.

Q4.

Answer :

Percentage of copper = 30%

Percentage of nickel = 42%

Percentage of zinc = $\{100 - (30 + 42)\}\%$
 $= 28\%$

$$\therefore \text{Mass of zinc in 1 kg of the alloy} = \left(\frac{28}{100} \times 1\right) \text{ kg} = 0.28 \text{ kg} = 280 \text{ g}$$

Q5.

Answer :

Let the total number of students be x . Then, we have :

Percentage of boys = 60%

Percentage of girls = 40%

\therefore Number of girls = 40% of x

$$= \left(x \times \frac{40}{100}\right)$$

$$= \frac{40x}{100}$$

$$\text{Now, } \frac{40x}{100} = 14$$

$$\Rightarrow x = \left(14 \times \frac{100}{40}\right)$$

$$\Rightarrow x = 35$$

\therefore Total number of students = 35

Q6.

Answer :

We have :

$$\begin{aligned}8\frac{1}{3}\% &= \frac{25}{3}\% \\ &= \left(\frac{25}{3} \times \frac{1}{100}\right) \\ &= \frac{1}{12} \\ &= 0.083\end{aligned}$$

Also, $\frac{4}{25} = 0.16$

The third number is 0.15.

Q7. Clearly, 0.16 is the largest.

Answer : i.e., $\frac{4}{25}$ is the largest.

(d) 10%

$$\text{Required percentage} = \left(\frac{1}{45} \times \frac{9}{2} \times 100\right)\% = 10\%$$

Q8.

Answer :

(c) 120

Let the required number be x

$$x - (30\% \text{ of } x) = 84$$

$$\Rightarrow \left\{x - \left(x \times \frac{30}{100}\right)\right\} = 84$$

$$\Rightarrow \left(x - \frac{30x}{100}\right) = 84$$

$$\Rightarrow \frac{70x}{100} = 84$$

$$\Rightarrow x = \left(84 \times \frac{100}{70}\right)$$

$$\Rightarrow x = 120$$

Q9.

Answer :

(b) 15%

Let the required number be x . Then, we have :

$$(x\% \text{ of } 320) = 48$$

$$\Rightarrow \left(320 \times \frac{x}{100}\right) = 48$$

$$\Rightarrow \frac{320x}{100} = 48$$

$$\Rightarrow x = \left(48 \times \frac{100}{320}\right)$$

$$\Rightarrow x = 15\%$$

Q10.

Answer :

(d) 120%

$$\text{Required percentage} = \left(\frac{54}{45} \times 100\right)\% = 120\%$$

Q11.

Answer :

(c) 80

Let the required number be x . Then, we have :

$$(25\% \text{ of } x) + 60 = x$$

$$\Rightarrow \left(x \times \frac{25}{100}\right) + 60 = x$$

$$\Rightarrow \frac{25x}{100} + 60 = x$$

$$\Rightarrow \left(\frac{25x}{100} - x\right) = -60$$

$$\Rightarrow \frac{-75x}{100} = -60$$

$$\Rightarrow x = \left(60 \times \frac{100}{75}\right)$$

$$\Rightarrow x = 80$$

Q12.

Answer :

(c) 240

Let the required number be x . Then, we have :

$$(5\% \text{ of } x) = 12$$

$$\Rightarrow \left(x \times \frac{5}{100}\right) = 12$$

$$\Rightarrow \frac{5x}{100} = 12$$

$$\Rightarrow x = \left(12 \times \frac{100}{5}\right)$$

$$\Rightarrow x = 240$$

Q13.

Answer :

$$\begin{aligned} \text{(i) } 7\frac{1}{2}\% \text{ of Rs } 1200 &= \left(\frac{15}{2}\% \text{ of Rs } 1200\right) \\ &= \text{Rs } \left(\frac{15}{2} \times \frac{1}{100} \times 1200\right) \\ &= \text{Rs } 90 \end{aligned}$$

Hence, $7\frac{1}{2}\%$ of Rs 1200 = Rs 90

$$\text{(ii) Required percentage} = \left(\frac{240}{3 \times 1000} \times 100\right)\% = 8\%$$

Hence, 240 ml is 8% of 3 L.

$$\begin{aligned} \text{(iii) } (x\% \text{ of } 35) &= 42 \\ \Rightarrow \left(35 \times \frac{x}{100}\right) &= 42 \\ \Rightarrow \frac{35x}{100} &= 42 \\ \Rightarrow x &= \left(42 \times \frac{100}{35}\right) \\ \Rightarrow x &= 120\% \end{aligned}$$

\therefore If $x\%$ of 35 is 42, then $x = 120\%$.

$$\text{(iv) } \left(\frac{12}{5} \times 100\right)\% = 240\%$$

Hence, $\frac{12}{5} = 240\%$

(v) Let the required number be x . Then, we have :

$$120 = x\% \text{ of } 80$$

$$\Rightarrow \left(80 \times \frac{x}{100}\right) = 120$$

$$\Rightarrow \frac{80x}{100} = 120$$

$$\Rightarrow x = \left(120 \times \frac{100}{80}\right)$$

$$\Rightarrow x = 150\%$$

$\therefore 120 = 150\% \text{ of } 80$

Q14.

Answer :

$$\begin{aligned} \text{(i) } 6\% \text{ of } 8 &= \left(8 \times \frac{6}{100}\right) \\ &= 0.48 \end{aligned}$$

Hence, it is false.

$$\begin{aligned} \text{(ii) } 6 : 5 &= \frac{6}{5} \\ &= \left(\frac{6}{5} \times 100\right)\% \\ &= 120\% \end{aligned}$$

Hence, it is false.

$$\begin{aligned} \text{(iii) } \frac{3}{5} &= \left(\frac{3}{5} \times 100\right)\% \\ &= 60\% \end{aligned}$$

Hence, it is true.

$$\text{(iv) } 6 \text{ hours} = \left(\frac{6}{24} \times 100\right)\% = 25\%$$

Hence, it is true.