

Question:1

Express each of the following per cents as fractions in the simplest forms:

i 45%

ii 0.25%

iii 150%

iv $6\frac{1}{4}\%$

Solution:

i $45\% = \frac{45}{100} = \frac{9}{20}$

ii $0.25\% = \frac{0.25}{100} = \frac{25}{10000} = \frac{5}{2000} = \frac{1}{400}$

iii $150\% = \frac{150}{100} = \frac{15}{10} = \frac{3}{2}$

iv $6\frac{1}{4}\% = \frac{25}{4} \div 100 = \frac{25}{100 \times 4} = \frac{1}{16}$

Question:2

Express each of the following fractions as a per cent:

i $\frac{3}{4}$

ii $\frac{53}{100}$

iii $1\frac{3}{5}$

iv $\frac{7}{20}$

Solution:

i $\left(\frac{3}{4} \times 100\right)\% = 75\%$

ii $\left(\frac{53}{100} \times 100\right)\% = 53\%$

iii $1\frac{3}{5} = \left(\frac{8}{5} \times 100\right)\% = 160\%$

iv $\left(\frac{7}{20} \times 100\right)\% = 35\%$

Question:3

Express each of the following ratios as per cents:

i 4 : 5

ii 1 : 5

iii 11 : 125

Solution:

$\left(i\right) 4 : 5 = \frac{4}{5} = \left(\frac{4}{5} \times 100\right)\% = 80\%$ $\left(ii\right) 1 : 5 = \frac{1}{5} = \left(\frac{1}{5} \times 100\right)\% = 20\%$ $\left(iii\right) 11 : 125 = \frac{11}{125} = \left(\frac{11}{125} \times 100\right)\% = 8.8\%$

Question:4

Express each of the following per cents as ratios in the simplest forms:

i 2.5%

ii 0.4%

iii $13\frac{3}{4}\%$

Solution:

i $2.5\% = \frac{2.5}{100} = \frac{25}{1000} = \frac{5}{200} = \frac{1}{40}$

ii $0.4\% = \frac{0.4}{100} = \frac{4}{1000} = \frac{1}{250}$

iii $13\frac{3}{4}\% = \frac{55}{4 \times 100} = \frac{11}{80}$

Question:5

Express each of the following per cents as decimals:

i 12.5%

ii 75%

iii 128.8%

iv 0.05%

Solution:

i $12.5\% = \frac{12.5}{100} = \frac{125}{1000} = 0.125$

ii $75\% = \frac{75}{100} = 0.75$

iii $128.8\% = \frac{128.8}{100} = \frac{1288}{1000} = 1.288$

iv $0.05\% = \frac{0.05}{100} = \frac{5}{10000} = 0.0005$

Question:6

Express each of the following decimals as a per cent:

- i* 0.004
- ii* 0.24
- iii* 0.02
- iv* 0.275

Solution:

- i* $0.004 = 0.004 \times 100\% = 0.4\%$
- ii* $0.24 = 0.24 \times 100\% = 24\%$
- iii* $0.02 = 0.02 \times 100\% = 2\%$
- iv* $0.275 = 0.275 \times 100\% = 27.5\%$

Question:7

Write each of the following as whole numbers or mixed numbers:

- i* 136%
- ii* 250%
- iii* 300%

Solution:

- i* $136\% = 136/100 = 34/25$
- ii* $250\% = 250/100 = 5/2$
- iii* $300\% = 300/100 = 3$

Question:8

Find each of the following:

- i* 7% of Rs 7150
- ii* 40% of 400 kg
- iii* 20% of 15.125 litres
- iv* $3\frac{1}{3}\%$ of 90 km
- v* 2.5% of 600 metres

Solution:

- i* 7% of Rs. 7150 = $7/100 \times 7150 = 50050/100 = \text{Rs. } 500.50$
- ii* 40% of 400 kg = $40/100 \times 400 = 16000/100 = 160 \text{ kg}$
- iii* 20% of 15.125 litres = $20/100 \times 15.125 = 302.5/100 = 3.025 \text{ litres}$
- iv* $3\frac{1}{3}\% = \frac{10}{3 \times 100} \times 90 = 3 \text{ km}$
- v* 2.5% of 600 metres = $2.5/100 \times 600 = 1500/100 = 15 \text{ metres}$

Question:9

Find the number whose $12\frac{1}{2}\%$ is 64.

Solution:

Let the number be x.

$$12\frac{1}{2}\% \text{ of } x = 64 \quad \frac{25}{2} \div 100 \times x = 64 \quad \frac{25 \times x}{2 \times 100} = 64 \quad 25 \times x = 64 \times 2 \times 100 \quad x = \frac{64 \times 2 \times 100}{25} = 512$$

Question:10

What is the number, $6\frac{1}{4}\%$ of which is 2?

Solution:

Let the number be x.

$$6\frac{1}{4} \div 100 \text{ of } x = 2 \quad \frac{25}{4} \div 100 \times x = 2 \quad \frac{25 \times x}{4 \times 100} = 2 \quad 25 \times x = 2 \times 4 \times 100 \quad x = \frac{2 \times 4 \times 100}{25} = 32$$

Question:11

If 6 is 50% of a number, what is that number?

Solution:

Let the number be x.

$$\begin{aligned} 50\% \text{ of } x &= 6 \\ \Rightarrow 50/100 \times x &= 6 \\ \Rightarrow x &= 600/50 \\ \Rightarrow x &= 12 \end{aligned}$$

So, the number is 12.

Question:12

What per cent of

i 24 is 6?

ii Rs 125 is Rs 10?

iii 4 km is 160 metres?

iv Rs 8 is 25 paise

v 2 days is 8 hours?

vi 1 litre is 175 ml?

Solution:

Let the number be x .

i 24% of $x = 6$

$$\Rightarrow 24/100 \times x = 6$$

$$\Rightarrow x = 600/24 = 25\%$$

ii 125% of $x = 10$

$$\Rightarrow 125/100 \times x = 10$$

$$\Rightarrow x = 1000/125 = 8\%$$

iii 4 km = 4000 metres $1\text{ km} = 1000\text{ m}$

4000% of $x = 160$

$$\Rightarrow 4000/100 \times x = 160$$

$$\Rightarrow x = 16000/4000 = 4\%$$

iv Rs. 8 = 800 paise $Rs. 1 = 100\text{ paise}$

800% of $x = 25$

$$\Rightarrow 800/100 \times x = 25$$

$$\Rightarrow x = 2500/800 = 25/8 = 3.125\%$$

v 2 days = $2 \times 24 = 48$ $1\text{ day} = 24\text{ hours}$

48% of $x = 8$

$$\Rightarrow 48/100 \times x = 8$$

$$\Rightarrow x = 800/48 = 100/6 = 16.66\%$$

vi 1 litre = 1000 ml

1000% of $x = 175$

$$\Rightarrow 1000/100 \times x = 175$$

$$\Rightarrow x = 17500/1000 = 175/10 = 17.5\%$$

Question:13

What per cent is equivalent to $\frac{3}{8}$?

Solution:

Let the percentage equivalent to $3/8$ be x .

Then, $x\% = \frac{3}{8}$

$$\Rightarrow x/100 = \frac{3}{8}$$

$$\Rightarrow x = \frac{3 \times 100}{8} = 37.5$$

Therefore, $3/8 = 37.5\%$.

Question:14

Find the following:

i 8 is 4% of which number?

ii 6 is 60% of which number?

iii 6 is 30% of which number?

iv 12 is 25% of which number?

Solution:

Let the number be x .

i 4% of $x = 8$

$$\Rightarrow 4/100 \times x = 8$$

$$\Rightarrow x = 800/4 = 200$$

ii 60% of $x = 6$

$$\Rightarrow 60/100 \times x = 6$$

$$\Rightarrow x = 600/60 = 10$$

iii 30% of $x = 6$

$$\Rightarrow 30/100 \times x = 6$$

$$\Rightarrow x = 600/30 = 20$$

iv 25% of $x = 12$

$$\Rightarrow 25/100 \times x = 12$$

$$\Rightarrow x = 1200/25 = 48$$

Question:15

Convert each of the following pairs into percentages and find out which is more?

i 25 marks out of 30, 35 marks out of 40.

ii 100 runs scored off 110 balls, 50 runs scored off 55 balls.

Solution:

i 25 marks out of 30

$$\Rightarrow 25/30 \times 100 = 2500/30 = 83.33\%$$

35 marks out of 40

$$\Rightarrow 35/40 \times 100 = 3500/40 = 87.5\%$$

87.5% is greater than 83.33%.

ii 100 runs scored off 110 balls

$$\Rightarrow 100/110 \times 100 = 10000/110 = 90.90\%$$

50 runs scored off 55 balls

$$\Rightarrow 50/55 \times 100 = 5000/55 = 90.90\%$$

Both percentages are equal.

Question:16

Find 20% more than Rs 200.

Solution:

20% more than 200 means 20% of 200 plus 200.

That is, $\{20/100 \times 200\} + 200 = 4000/100 + 200 = 40 + 200 = 240$.

Question:17

Find 10% less than Rs 150.

Solution:

10% less than Rs. 150 means 150 minus 10% of 150.

That is, $150 - \{10/100 \times 150\} = 150 - 1500/100 = 150 - 15 = \text{Rs. } 135$.

Question:18

Ashu had 24 pages to write. By the evening, he had completed 25% of his work. How many pages were left?

Solution:

Total number of pages Ashu had to write = 24

Number of pages Ashu completed by the evening = 25% of 24 = $25/100 \times 24 = 600/100 = 6$

Pages left for completion = $24 - 6 = 18$ pages

Question:19

A box contains 60 eggs. Out of which $16\frac{2}{3}\%$ are rotten ones. How many eggs are rotten?

Solution:

Total eggs in the bag = 60

Rotten eggs = $16\frac{2}{3}\%$ of 60 = $\frac{50}{3}\%$ of 60 = $\frac{50}{3 \times 100} \times 60 = \frac{1}{6} \times 60 = 10$ eggs

Question:20

Rohit obtained 45 marks out of 80. What per cent marks did he get.

Solution:

Marks obtained by Rohit = 45/80

Percentage of marks that Rohit obtained = $45/80 \times 100 = \frac{45}{80} \times 100 = \frac{45 \times 100}{80} = \frac{450}{8} = \frac{225}{4} = 56\frac{1}{4}$

Question:21

Mr Virmani saves 12% of his salary. If he receives Rs 15900 per month as salary, find his monthly expenditure.

Solution:

Mr. Virmani's salary = Rs. 15900 per month

Mr. Virmani's savings = 12% of Rs. 15900 = $\frac{12}{100} \times 15900$ = Rs. 1908

Mr. Virmani's monthly expenditure = Rs. 15900 – 1908 = Rs. 13992

Question:22

A lawyer willed his 3 sons Rs 250000 to be divided into portions 30%, 45% and 25%. How much did each of them inherit?

Solution:

Total amount with the lawyer = Rs. 250000

First son's inheritance = 30% of 250000 = $\frac{30}{100} \times 250000$ = $\frac{7500000}{100}$ = Rs. 75000

Second son's inheritance = 45% of 250000 = $\frac{45}{100} \times 250000$ = $\frac{11250000}{100}$ = Rs. 112500

Third son's inheritance = 25% of 250000 = $\frac{25}{100} \times 250000$ = $\frac{6250000}{100}$ = Rs. 62500

Question:23

Rajdhani College has 2400 students, 40% of whom are girls. How many boys are there in the college?

Solution:

Total number of students in Rajdhani College = 2400

Number of girls = 40% of 2400 = $\frac{40}{100} \times 2400$ = $\frac{96000}{100}$ = 960

Number of boys = 2400 - 960 = 1440 boys

Question:24

Aman obtained 410 marks out of 500 in CBSE XII examination while his brother Anish gets 536 marks out of 600 in IX class examination. Find whose performance is better?

Solution:

Aman's marks in CBSE XII = 410/500

Percentage of marks obtained by Aman = $\frac{410}{500} \times 100$ = 82

Anish's marks in CBSE IX = 536/600

Percentage of marks obtained by Anish = $\frac{536}{600} \times 100$ = 89.33

So, Anish's performance 89.33 is better than Aman's 82.

Question:25

Rahim obtained 60 marks out of 75 in Mathematics. Find the percentage of marks obtained by Rahim in Mathematics.

Solution:

Marks obtained by Rahim in mathematics = 60/75

Percentage of marks obtained by Rahim = $\frac{60}{75} \times 100$ = 80

That is, 80%.

Question:26

In an orchard, $16\frac{2}{3}\%$ of the trees are apple trees. If the number of trees in the orchard is 240, find the number of other type of trees in the orchard.

Solution:

Let the number of apple trees be 'x'.

Number of trees in the orchard = 240

Number of apple trees = $16\frac{2}{3}\%$ of x

According to the given condition,

$$16\frac{2}{3}\% \text{ of } 240 = x$$

$$\Rightarrow \left(\frac{50}{3} \div 100\right) \times 240 = x$$

$$\Rightarrow \frac{50 \times 240}{3 \times 100} = x$$

$$\Rightarrow x = 40$$

Number of other types of trees = Total number of trees - number of apple trees = 240 - 40 = 200 trees

Question:27

Ram scored 553 marks out of 700 and Gita scored 486 marks out of 600 in science. Whose performance is better?

Solution:

Marks scored by Ram = 553/700

Percentage of marks scored by Ram = $553/700 \times 100 = 0.79 \times 100 = 79$

Marks scored by Gita = 486/600

Percentage of marks scored by Gita = $486/600 \times 100 = 0.81 \times 100 = 81$

Gita's performance 81 is better than Ram's 79.

Question:28

Out of an income of Rs 15000, Nazima spends Rs 10200. What per cent of her income does she save?

Solution:

Nazima's total income = Rs. 15000

Amount Nazima spends = Rs. 10200

Amount Nazima saves = Rs. 15000 – 10200 = Rs. 4800

Percentage of income Nazima saves = $4800/10200 \times 100 = 480000/10200 = 32$

Nazima saves 32% of her income.

Question:29

45% of the students in a school are boys. If the total number of students in the school is 880, find the number of girls in the school.

Solution:

Total number of students in the school = 880

Number of boys in the school = 45% of 880

$$= 45/100 \times 880$$

$$= 39600/100 = 396$$

Number of girls in the school = 880 - 396 = 484

Question:30

Mr. Sidhana saves 28% of his income. If he saves Rs 840 pr month, find his monthly income.

Solution:

Let Mr. Sidhana's monthly income be x .

Monthly savings = Rs. 840

$$28\% \text{ of } x = \text{Rs. } 840$$

$$\Rightarrow 28/100 \times x = \text{Rs. } 840$$

$$\Rightarrow 28x = \text{Rs. } 84000$$

$$\Rightarrow x = \text{Rs. } 84000/28 = \text{Rs. } 3000$$

Mr. Sidhana's monthly income = Rs. 3000

Question:31

In an examination, 8% of the students fail. What percentage of the students pass? If 1650 students appeared in the examination, how many passed?

Solution:

Total number of students who appeared for the examination = 1650

Number of students who failed = 8% of 1650

$$= 8/100 \times 1650$$

$$= 8 \times 1650/100$$

$$= 13200/100 = 132$$

Number of students who passed = 1650 - 132 = 1518

Percentage of students who passed = $1518/1650 \times 100 = 0.92 \times 100 = 92$

That is, 92% of the students passed the examination.

Question:32

In an examination, 9% of the candidates passed and 46 failed. How many candidates appeared?

Solution:

Let the total number of candidates be x .

Number of candidates who failed = 46

Number of candidates who passed = 92% of x

According to the given condition,

$$92\% \text{ of } x = x - 46$$

$$\Rightarrow 92/100x = x - 46$$

$$\Rightarrow 92x = 100x - 4600$$

$$\Rightarrow -8x = -4600$$

$$\Rightarrow x = 4600/8 =$$

Number of candidates who appeared for the examination = 575

Question:33

$\frac{2}{5}$ as a percent is

a 30%

b 35%

c 40%

d 45%

Solution:

$$\frac{2}{5} = \frac{2}{5} \times \frac{100}{100} = \frac{40}{100} = 40\%$$

Hence, the correct option is *c*.

Question:34

$\frac{5}{4}$ as a percent is

a 80%

b 125%

c 120%

d 130%

Solution:

$$\frac{5}{4} = \frac{5}{4} \times \frac{100}{100} = \frac{5 \times 25}{100} = \frac{125}{100} = 125\%$$

Hence, the correct option is *b*.

Question:35

The ratio 3 : 5 as a percent is

a 60%

b 50%

c 40%

d 80%

Solution:

$$\frac{3}{5} = \frac{3}{5} \times \frac{100}{100} = \frac{3 \times 20}{100} = \frac{60}{100} = 60\%$$

Hence, the correct option is *a*.

Question:36

12% as a fraction is

a $\frac{3}{25}$

b $\frac{4}{25}$

c $\frac{3}{20}$

d $\frac{6}{25}$

Solution:

$$12\% = \frac{12}{100} = \frac{12 \div 4}{100 \div 4} = \frac{3}{25}$$

Hence, the correct option is *a*.

Question:37

$1\frac{1}{4}\%$ as a fraction is

a $\frac{1}{40}$

b $\frac{1}{60}$

c $\frac{1}{80}$

$$d \frac{1}{70}$$

Solution:

$$1\frac{1}{4}\% = \frac{5}{4}\% = \frac{5}{4} \times \frac{1}{100} = \frac{1}{4 \times 20} = \frac{1}{80}$$

Hence, the correct option is *c*.

Question:38

Which of the following fractions is equivalent to 25% ?

$$a \frac{1}{4}$$

$$b \frac{1}{5}$$

$$c \frac{1}{3}$$

$$d \frac{1}{2}$$

Solution:

$$25\% = \frac{25}{100} = \frac{25 \div 25}{100 \div 25} = \frac{1}{4}$$

Hence, the correct option is *a*.

Question:39

If 25% of *x* is 100, then *x* =

$$a \ 100$$

$$b \ 200$$

$$c \ 300$$

$$d \ 400$$

Solution:

$$25\% \text{ of } x = 100 \Rightarrow \frac{25}{100} \times x = 100 \Rightarrow \frac{x}{4} = 100 \Rightarrow \frac{4 \times x}{4} = 4 \times 100 \Rightarrow x = 400$$

Hence, the correct option is *d*.

Question:40

If 8% of a number is 6, then the number is

$$a \ 96$$

$$b \ 60$$

$$c \ 96$$

$$d \ 75$$

Solution:

Let the required number be *x*.

$$8\% \text{ of } x = 6 \Rightarrow \frac{8}{100} \times x = 6 \Rightarrow \frac{2x}{25} = 6 \Rightarrow \frac{2x \times 25}{25} = 6 \times 25 \Rightarrow 2x = 150 \Rightarrow x = \frac{150}{2} \Rightarrow x = 75$$

Hence, the correct option is *d*.

Question:41

If *x*% of 75 is 12, then *x* =

$$a \ 8$$

$$b \ 10$$

$$c \ 12$$

$$d \ 16$$

Solution:

Let the required number be *x*.

$$x\% \text{ of } 75 = 12 \Rightarrow \frac{x}{100} \times 75 = 12 \Rightarrow \frac{3x}{4} = 12 \Rightarrow \frac{3x \times 4}{4} = 12 \times 4 \Rightarrow 3x = 48 \Rightarrow x = \frac{48}{3} \Rightarrow x = 16$$

Hence, the correct option is *d*.

Question:42

If $\frac{5}{6}$ of 29% of x is 29, then $x =$

- a* 290
- b* 58
- c* 120
- d* 100

Solution:

Let the required number be x .

$$\frac{5}{6} \text{ of } 29\% \text{ of } x = 29 \Rightarrow \frac{5}{6} \left(\frac{29}{100} \times x \right) = 29 \Rightarrow \frac{29x}{120} = 29 \Rightarrow 29x = 29 \times 120 \Rightarrow x = \frac{29 \times 120}{29} \Rightarrow x = 120$$

Hence, the correct option is *c*.

Question:43

What percent of $\frac{2}{7}$ is $\frac{1}{35}$?

- a* 25%
- b* 20%
- c* 15%
- d* 10%

Solution:

Let the required number be x .

$$x\% \text{ of } \frac{2}{7} = \frac{1}{35} \Rightarrow \frac{x}{100} \times \frac{2}{7} = \frac{1}{35} \Rightarrow \frac{x}{350} = \frac{1}{35} \Rightarrow \frac{350 \times x}{350} = \frac{1 \times 350}{35} \Rightarrow x = \frac{350}{35} \Rightarrow x = 10$$

Hence, the correct option is *d*.

Question:44

If $x = 100$, then 120% of x is

- a* 125
- b* 115
- c* 120
- d* 110

Solution:

$$120\% \text{ of } x = \frac{120}{100} \times 100 = 120$$

Hence, the correct option is *c*.

Question:45

40% of 150 + 60% of 150 =

- a* 200
- b* 150
- c* 250
- d* 180

Solution:

$$40\% \text{ of } 150 = \frac{40}{100} \times 150 = 60 \quad 60\% \text{ of } 150 = \frac{60}{100} \times 150 = 90$$

Therefore, 40% of 150 + 60% of 150 = 60 + 90 = 150.

Hence, the correct option is *b*.

Question:46

50% of 150 + 70% of 300 =

- a* 295
- b* 285
- c* 265
- d* 275

Solution:

$$50\% \text{ of } 150 = \frac{50}{100} \times 150 = 75 \quad 70\% \text{ of } 300 = \frac{70}{100} \times 300 = 210$$

Therefore, $50\% \text{ of } 150 + 70\% \text{ of } 300 = 75 + 210 = 285$.

Hence, the correct option is *b*.

Question:47

$55\% \text{ of } 1000 \div 60\% \text{ of } 2000 =$

a $\frac{11}{24}$

b $\frac{12}{25}$

c $\frac{13}{24}$

d $\frac{14}{25}$

Solution:

$$55\% \text{ of } 1000 = \frac{55}{100} \times 1000 = 550 \quad 60\% \text{ of } 2000 = \frac{60}{100} \times 2000 = 1200 \quad \text{Therefore, } 55\% \text{ of } 1000 \div 60\% \text{ of } 2000 = \frac{550}{1200} = \frac{550 \div 50}{1200 \div 50} = \frac{11}{24}.$$

Hence, the correct option is *a*.

Question:48

If $x\% \text{ of } 2000 = 600$, then $x =$

a 60

b 30

c 40

d 50

Solution:

$$x\% \text{ of } 2000 = 600 \Rightarrow \frac{x}{100} \times 2000 = 600 \Rightarrow 20x = 600 \Rightarrow x = \frac{600}{20} \Rightarrow x = 30$$

Hence, the correct option is *b*.

Question:49

If $x\% \text{ of } \frac{12}{5}$ is $\frac{18}{25}$, then $x =$

a 30

b 40

c 72

d 50

Solution:

$$x\% \text{ of } \frac{12}{5} = \frac{18}{25} \Rightarrow \frac{x}{100} \times \frac{12}{5} = \frac{18}{25} \Rightarrow \frac{12x \times 500}{500} = \frac{18 \times 500}{25} \Rightarrow 12x = 18 \times 20 \Rightarrow x = \frac{18 \times 20}{12} \Rightarrow x = 30$$

Hence, the correct option is *a*.

Question:50

The value of $30\% \text{ of } 60\% \text{ of } 200$ is

a 23

b 24

c 18

d 36

Solution:

$$60\% \text{ of } 200 = \frac{60}{100} \times 200 = 120 \quad 30\% \text{ of } 60\% \text{ of } 200 = \frac{30}{100} \times 120 = 36$$

Hence, the correct option is *d*.

Question:51

If $\frac{2}{5}$ of $50\% \text{ of } x$ is 10, then $x =$

a 100

b 50

c 25

d 80

Solution:

$$\frac{2}{5} \text{ of } 50\% \text{ of } x = 10 \Rightarrow \frac{2}{5} \times \frac{50}{100} \times x = 10 \Rightarrow \frac{x}{5} = 10 \Rightarrow \frac{x \times 5}{5} = 10 \times 5 \Rightarrow x = 50$$

Hence, the correct option is *b*.

Question:52

If $\frac{4}{7}$ of 49% of x is 21, then $x =$

a 125

b 98

c 84

d 75

Solution:

$$\frac{4}{7} \text{ of } 49\% \text{ of } x = 21 \Rightarrow \frac{4}{7} \times \frac{49}{100} \times x = 21 \Rightarrow \frac{7x}{25} = 21 \Rightarrow \frac{7x \times 25}{25} = 21 \times 25 \Rightarrow x = \frac{21 \times 25}{7} \Rightarrow x = 75$$

Hence, the correct option is *d*.

Question:53

Which of the following fractions is equivalent to 12.5% ?

a $\frac{1}{8}$

b $\frac{1}{6}$

c $\frac{1}{5}$

d $\frac{1}{12}$

Solution:

$$12.5\% = \frac{12.5}{100} = \frac{125}{1000} = \frac{125 \div 25}{1000 \div 25} = \frac{5}{40} = \frac{5 \div 5}{40 \div 5} = \frac{1}{8}$$

Hence, the correct option is *a*.

Question:54

Ravish saved 55% of his income. If his income is 11000, then his expenditure is

a 6050

b 7450

c 4950

d 3550

Solution:

Savings of Ravish = 55% of 11000

Expenditures of Ravish = 45% of 11000

$$= \frac{45}{100} \times 11000$$

$$= 4950$$

Hence, the correct option is *c*.

Question:55

If 35% of a number added to 39 is the number itself, the number is

a 60

b 65

c 75

d 105

Solution:

Let the required number be x .

According to the question,

$$35\% \text{ of } x + 39 = x \Rightarrow \frac{35}{100} \times x + 39 = x \Rightarrow \frac{35x \times 100}{100} = (x - 39) \times 100 \Rightarrow 35x = 100x - 3900 \Rightarrow 100x - 35x = 3900 \Rightarrow 65x = 3900 \Rightarrow x = \frac{3900}{65} \Rightarrow x = 60$$

Hence, the correct option is *a*.

Question:56

On increasing the salary of a man by 25%, it becomes 20,000. What was his original salary?

- a* 15000
- b* 16000
- c* 18000
- d* 25000

Solution:

Let the original salary of the man be x .

According to the question,

$$x + 25\% \text{ of } x = 20000 \Rightarrow x + \frac{25}{100} \times x = 20000 \Rightarrow x + \frac{x}{4} = 20000 \Rightarrow \frac{4x+4}{4} = 20000 \Rightarrow \frac{5x}{4} \times 4 = 20000 \times 4 \Rightarrow 5x = 80000 \Rightarrow x = \frac{80000}{5} \Rightarrow x = 16000$$

Therefore, Original salary of the man is 16000.

Hence, the correct option is *b*.

Question:57

Rohit scored 180 marks in the first test and 150 marks in the second test. The maximum marks in each test is 200. What is the decrease in his performance in percentage points?

- a* 20%
- b* 15%
- c* 25%
- d* 23%

Solution:

Marks scored in first test = 180

Marks scored in second test = 150

Maximum marks = 200

Decrease in marks = $180 - 150 = 30$

Decrease in performance in percentage = $\frac{30}{200} \times 100 = 15\%$

Hence, the correct option is *b*.