Exercise 8.2

Question 1:

Convert the given fractional numbers to percent:

(a) $\frac{1}{8}$ (b) $\frac{5}{4}$ (c) $\frac{3}{40}$ (d) $\frac{2}{7}$

Answer 1:

(a) $\frac{1}{8} = \frac{1}{8} \times 100\% = \frac{25}{2}\% = 12.5\%$

(b) $\frac{5}{4} = \frac{5}{4} \times 100\% = 5 \text{ x } 25\% = 125\%$

(c) $\frac{3}{40} = \frac{3}{40} \times 100\% = \frac{3}{2} \times 5\% = \frac{15}{2}\% = 7.5\%$

(d) $\frac{2}{7} = \frac{2}{7} \times 100\% = \frac{200}{7}\% = 28\frac{4}{7}\%$

Question 2:

Convert the given decimal fractions to per cents:

(a) 0.65 (b) 2.1 (c) 0.02 (d) 12.35

Answer 2:

(a) $0.65 = \frac{65}{100} \times 100\% = 65\%$

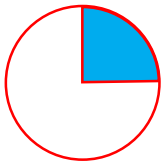
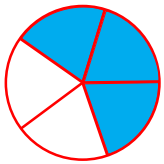
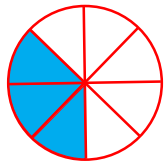
(b) $2.1 = \frac{2.1}{100} \times 100\% = 210\%$

(c) $0.02 = \frac{2}{100} \times 100\% = 2\%$

(b) $12.35 = \frac{12.35}{100} \times 100\% = 1235\%$

Question 3:

Estimate what part of the figures is coloured and hence find the percent which is coloured.

Answer 3:

(i) Coloured part = $\frac{1}{4}$

$\therefore$ Percent of coloured part = $\frac{1}{4} \times 100\% = 25\%$

(ii) Coloured part = $\frac{3}{5}$

$\therefore$ Percent of coloured part = $\frac{3}{5} \times 100\% = 60\%$

(iii) Coloured part = $\frac{3}{8}$

$\therefore$ Percent of coloured part = $\frac{3}{8} \times 100\% = \frac{3}{2} \times 25\%$

$= 37.5\%$

Question 4:

Find:

(a) 15% of 250

(b) 1% of 1 hour

(c) 20% of ₹2500

(d) 75% of 1 kg

Answer 4:

(a) 15% of 250 $= \frac{15}{100} \times 250 = 15 \text{ x } 2.5 = 37.5$

(b) 1% of 1 hours = 1% of 60 minutes = 1% of (60 x 60) seconds

$= \frac{1}{100} \times 60 \times 60 = 6 \text{ x } 6 = 36$ seconds

(c) 20% of ₹2500 = $\frac{20}{100}\times 2500$ = 20 x 25 = ₹ 500

(d) 75% of 1 kg = 75% of 1000 g = $\frac{75}{100}\times 1000$ = 750 g = 0.750 kg

Question 5:

Find the whole quantity if:

(a) 5% of it is 600

(b) 12% of it is ₹1080

(c) 40% of it is 500 km

(d) 70% of it is 14 minutes

(e) 8% of it is 40 litres

Answer 5:

Let the whole quantity be x in given questions:

(a) 5% of x = 600

$\Rightarrow \quad \frac{5}{100}\times x = 600$

$\Rightarrow \quad x = \frac{600\times 100}{5}$ = 12,000

(b) 12% of x = ₹1080

$\Rightarrow \quad \frac{12}{100}\times x = 1080$

$\Rightarrow \quad x = \frac{1080\times 100}{12}$ = ₹ 9,000

(c) 40% of x = 500 km

$\Rightarrow \quad \frac{40}{100}\times x = 500$

$\Rightarrow \quad x = \frac{500\times 100}{40}$ = 1,250 km

(d) 70% of x = 14 minutes

$\Rightarrow \quad \frac{70}{100}\times x = 14$

$\Rightarrow \quad x = \frac{14\times 100}{70}$ = 20 minutes

(e) 8% of x = 40 litres

$\Rightarrow \quad \frac{8}{100}\times x = 40$

$\Rightarrow \quad x = \frac{40\times 100}{8}$ = 500 litres

Question 6:

Convert given per cents to decimal fractions and also to fractions in simplest forms:

(a) 25% (b) 150% (c) 20% (d) 5%

Answer 6:

S. No.	Per cents	Fractions	Simplest form	Decimal form
(a)	25%	$\frac{25}{100}$	$\frac{1}{4}$	0.25
(b)	150%	$\frac{150}{100}$	$\frac{3}{2}$	1.5
(c)	20%	$\frac{20}{100}$	$\frac{1}{5}$	0.2
(d)	5%	$\frac{5}{100}$	$\frac{1}{20}$	0.05

Question 7:

In a city, 30% are females, 40% are males and remaining are children. What percent are children?

Answer 7:

Given: Percentage of females = 30%

Percentage of males = 40%

Total percentage of females and males = 30 + 40 = 70%

Percentage of children = Total percentage – Percentage of males and females

= 100% – 70%

= 30%

Hence, 30% are children.

Question 8:

Out of 15,000 voters in a constituency, 60% voted. Find the percentage of voters who did not vote. Can you now find how many actually did not vote?

Answer 8:

Total voters = 15,000

Percentage of voted candidates = 60%

Percentage of not voted candidates = 100 – 60 = 40%

Actual candidates, who did not vote = 40% of 15000

$$= \frac{40}{100} \times 15000 = 6{,}000$$

Hence, 6,000 candidates did not vote.

Question 9:

Meeta saves ₹ 400 from her salary. If this is 10% of her salary. What is her salary?

Answer 9:

Let Meera's salary be ₹ x.

Now, 10% of salary = ₹ 400

$\Rightarrow$ 10% of x = ₹ 400

$\Rightarrow \quad \frac{10}{100} \times x = 400$

$\Rightarrow \quad x = \frac{400 \times 100}{10}$

$\Rightarrow \quad x = 4{,}000$

Hence, Meera's salary is ₹ 4,000.

Question 10:

A local cricket team played 20 matches in one season. It won 25% of them. How many matches did they win?

Answer 10:

Number of matches played by cricket team = 20

Percentage of won matches = 25%

Total matches won by them = 25% of 20

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

$= 5$

Hence, they won 5 matches.