NCERT Solutions For Class 7 Maths Comparing Quantities Exercise 8.2

Q1. Convert the given fractional numbers to per cents.

(a) $\frac{1}{8}$ **(b)** $\frac{5}{4}$

(c) $\frac{3}{40}$ **(d)** $\frac{2}{7}$

Ans:

(a)

$$\frac{1}{8}=\frac{1}{8}\times\frac{100}{100}$$
$$=\frac{1}{8}\times 100\ \%$$
$$=12.5\%$$

(b) $\frac{5}{4}$

$$\frac{5}{4}=\frac{5}{4}\times\frac{100}{100}$$
$$=\frac{500}{4}\ \%=125\ \%$$

(c) $\frac{3}{40}$

$$\frac{3}{40} = \frac{3}{40} \times \frac{100}{100}$$
$$= \frac{300}{40}\ \% = 7.5\ \%$$

(d) $\frac{2}{7}$

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

Q2. Convert the given decimal fractions to per cents.
(a) 0.65 (b) 2.1 (c) 0.02 (d) 12.35

Ans:

(a) 0.65

$$0.65 = 0.65 \times 100\ \%$$
$$= \frac{65 \times 100}{100}\ \% = 65\%$$

(b) 2.1

$$2.1 = 2.1 \times 100\ \%$$
$$= \frac{21 \times 100}{10}\ \% = 210\%$$

(c) 0.02

$$0.02 = 0.02 \times 100\ \%$$
$$= \frac{2 \times 100}{100}\ \% = 2\%$$

(d) 12.35

$$12.35 = 12.35 \times 100\ \%$$
$$= \frac{1235 \times 100}{100}\ \% = 1235\ \%$$

Q3. Estimate what part of the figures is coloured and hence find the per cent which is coloured.

(i) (ii) (iii)

Ans:

(i) Here, 1 part out of 4 equal parts are shaded which represents the fraction $\frac{1}{4}$.

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

(ii) Here, 3 parts out of 5 equal parts are shaded which represents the fraction $\frac{3}{5}$.

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

(iii) Here, 3 parts out of 8 equal parts are shaded which represents the fraction $\frac{3}{8}$.

$$\frac{3}{8}=\frac{3}{8}\times 100\ \%=\frac{300}{8}\ \%=37.5\ \%$$

Q4. Find:
(a) 15% of 250 (b) 1% of 1 hour

(c) 20% of Rs 2500 (d) 75% of 1 kg

Ans:

(a) $15\%\text{ of }250=\frac{15}{100}\times250=\frac{75}{2}=37.5$

(b) 1 hour = 60 minutes

$$1\%\text{ of }60\text{ minutes}=\frac{1}{100}\times60=\frac{3}{5}\text{minutes}$$

(c) $20\%\text{ of Rs }2500=\frac{20}{100}\times2500=\text{Rs }500$

(d)

$$75\%\text{ of }1\text{ kg}=\frac{75}{100}\times1=0.75\text{ kg}=\left(0.75\times1000\right)\text{ g}=750\text{ g}$$

Q5. 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

Ans:

(a) 5% of x = 600

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

$$x = 600 \times \frac{100}{5} = 12000$$

(b) 12% of x = Rs 1080

$$\frac{12}{100} \times x = \text{Rs}1080$$

$$x = \text{Rs}1080 \times \frac{100}{12} = \text{Rs } 9000$$

(c) 40% of x = 500 km

$$\frac{40}{100} \times x = 500 \text{ km}$$

$$x = 500 \times \frac{100}{40} = 1250 \text{ km}$$

(d) 70% of x = 14 min

$$x \times \frac{70}{100} = 14 \text{ min}$$

$$x = 14 \times \frac{100}{70} = 20 \text{ min}$$

(e) 8% of x = 40 L

$$x \times \frac{8}{100} = 40 \text{ L}$$

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

= 500 L

Q6. Convert given percents to decimal fractions and also to fractions in simplest forms:
(a) 25% (b) 150%

(c) 20% (d) 5%

Ans:

(a) 25% $= \frac{25}{100} = \frac{1}{4} = 0.25$

(b) 150% $= \frac{150}{100} = 1.5 = \frac{3}{2}$

(c) 20% $= \frac{20}{100} = 0.2 = \frac{1}{5}$

(d) 5% $= \frac{5}{100} = 0.05 = \frac{1}{20}$

Q7. In a city, 30% are females, 40% are males and remaining are children. What per cent are children?
Ans:

It is given that 30% are females and 40% are males.

Children = (100 - 30 - 40) % = 30%

Q8. 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?
Ans:

Percentage of voters who voted = 60%

Percentage of those who did not vote = 100% - 60% = 40%

Number of people who did not vote = 40% of 15000

$$= \frac{40}{100} \times 15000 = 6000$$

Therefore, 6000 people did not vote.

Q9. Meeta saves Rs 400 from her salary. If this is 10% of her salary. What is her salary?

Ans:

Let Meeta's salary be Rs x.

Given that,

10% of x = 400

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

$$\frac{x}{10} = 400$$

$x = 400 \times 10 = \text{Rs } 4000$

Therefore, Meeta's salary is Rs 4000.

Q10. A local cricket team played 20 matches in one season. It won 25% of them. How many matches did they win?

Ans:

Number of games won = 25% of 20

$$= \frac{25}{100} \times 20 = 5$$

Therefore, the team won 5 matches.

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