



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)

$$\begin{aligned}\frac{1}{8} &= \frac{1}{8} \times \frac{100}{100} \\ &= \frac{1}{8} \times 100 \% \\ &= 12.5\%\end{aligned}$$

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

$$\begin{aligned}\frac{5}{4} &= \frac{5}{4} \times \frac{100}{100} \\ &= \frac{500}{4} \% = 125 \%\end{aligned}$$

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

$$\begin{aligned}\frac{3}{40} &= \frac{3}{40} \times \frac{100}{100} \\ &= \frac{300}{40} \% = 7.5 \%\end{aligned}$$

(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

$$\begin{aligned}0.65 &= 0.65 \times 100 \% \\ &= \frac{65 \times 100}{100} \% = 65\%\end{aligned}$$

(b) 2.1

$$\begin{aligned}2.1 &= 2.1 \times 100 \% \\ &= \frac{21 \times 100}{10} \% = 210\%\end{aligned}$$

(c) 0.02

$$0.02 = 0.02 \times 100 \%$$

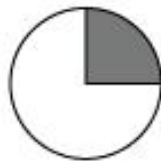
$$= \frac{2 \times 100}{100} \% = 2\%$$

(d) 12.35

$$12.35 = 12.35 \times 100 \%$$

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

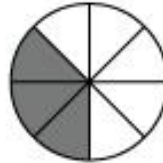
Q3. Estimate what part of the figures is coloured and hence find the per cent which is coloured.



(i)



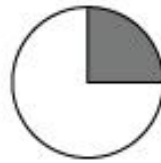
(ii)



(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:

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

(b) 1 hour = 60 minutes

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

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

(d)

$$75\% \text{ of 1 kg} = \frac{75}{100} \times 1 = 0.75 \text{ kg} = (0.75 \times 1000) \text{ g} = 750 \text{ g}$$

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

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

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

$$= 500 \text{ L}$$

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.

$$\text{Children} = (100 - 30 - 40) \% = 30\%$$

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,

$$10\% \text{ of } x = 400$$

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

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

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

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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