

Board – CBSE

Class – 7th

Topic – Comparing Quantities 8.2

**Q.1** Convert the given fractional numbers to percent.

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

**Sol:** (a)  $\frac{1}{8}$

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

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

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

**Q.2** Convert the given decimal fractions to per cents.

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

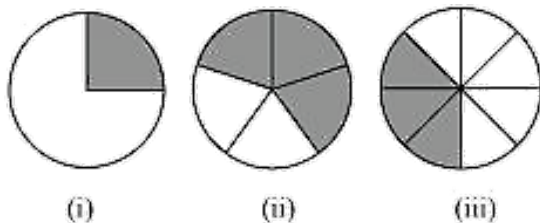
**Sol:** (a)  $0.65 = \frac{65}{100} \times 100\% = 65\%$

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

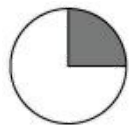
(c)  $0.02 = \frac{2}{100} \times 100\% = 2\%$

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

**Q.3** Estimate what part of the figures is coloured and hence find the per cent which is coloured.



**Sol:** (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  $\frac{3}{8}$ .



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

**Q.4** Find:

- (a) 15% of 250                      (b) 1% of 1 hour  
(c) 20% of Rs 2500                (d) 75% of 1 kg

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

(b) 1% of 1 hour =  $\frac{1}{100} \times 60 = \frac{3}{5}$  minutes

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

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

**Q.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

**Sol:** (a) 5% of x = 600

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

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

(b) 12% of  $x = \text{Rs } 1080$

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

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

(c) 40% of  $x = 500 \text{ km}$

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

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

(d) 70% of  $x = 14 \text{ min}$

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

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

(e) 8% of  $x = 40 \text{ L}$

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

$$x = 40 \times \frac{100}{8} = 500 \text{ L}$$

**Q.6** Convert given percent to decimal fractions and also to fractions in simplest forms:

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

**Sol:** (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)  $5\% = \frac{5}{100} = \frac{1}{20} = 0.05$

**Q.7** In a city, 30% are females, 40% are males and remaining are children. What per cent are children?

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

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

**Q.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?

**Sol:** Percentage of voters who voted = 60%

$$\text{Percentage of those who did not vote} = 100\% - 60\% = 40\%$$

$$\begin{aligned}\text{Number of people who did not vote} &= 40\% \text{ of } 15000 \\ &= \frac{40}{100} \times 15000 = 6000\end{aligned}$$

Therefore, 6000 people did not vote.

**Q.9** Meeta saves Rs 400 from her salary. If this is 10% of her salary. What is her salary?

**Sol:** 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.

**Q.10** A local cricket team played 20 matches in one season. It won 25% of them. How many matches did they win?

**Sol:** Number of games won = 25% of 20

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

Therefore, the team won 5 matches.