

CBSE Class –VII Mathematics
NCERT Solutions
Chapter 8 Comparing Quantities (Ex. 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: (a) $\frac{1}{8} = \frac{1}{8} \times 100\% = \frac{25}{2}\% = 12.5\%$

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

(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 percents:

(a) 0.65

(b) 2.1

(c) 0.02

(d) 12.35

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

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

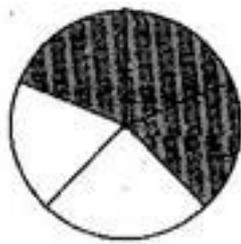
(c) $0.02 = \frac{2}{100} \times 100\% = 2\%$

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

Question 3. Estimate what part of the figures is coloured and hence find the percent which is coloured:



(i)



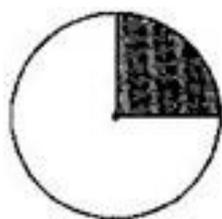
(ii)



(iii)

Answer: (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 Rs. 2500
- (d) 75% of 1 kg

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

(b) $1\% \text{ of } 1 \text{ hours} = 1\% \text{ of } 60 \text{ minutes} = 1\% \text{ of } (60 \times 60) \text{ seconds}$

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

(c) $20\% \text{ of Rs. } 2500 = \frac{20}{100} \times 2500 = 20 \times 25 = \text{Rs. } 500$

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

Question 5. Find the whole quantity if:

- (a) 5% of it is 600
- (b) 12% of it is Rs. 1080
- (c) 40% of it is 500 km
- (d) 70% of it is 14 minutes
- (e) 8% of it is 40 liters

Answer: Let the whole quantity be x in given questions:

(a) $5\% \text{ of } x = 600$

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

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

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

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

$$\Rightarrow x = \frac{1080 \times 100}{12} = \text{Rs. } 9,000$$

(c) 40% of $x = 500$ km

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

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

(d) 70% of $x = 14$ minutes

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

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

(e) 8% of $x = 40$ liters

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

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

Question 6. Convert given percents to decimal fractions and also to fractions in simplest forms:

(a) 25%

(b) 150%

(c) 20%

(d) 5%

Answer:

S. No.	Percents	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: 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: Total voters = 15,000

Percentage of voted candidates = 60%

Percentage of not voted candidates = $100\% - 60\% = 40\%$

$$\text{Actual candidates, who did not vote} = 40\% \text{ of } 15000 = \frac{40}{100} \times 15000 = 6,000$$

Hence, 6,000 candidates did not vote.

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

Answer: Let Meera's salary be Rs. x .

Now, 10% of salary = Rs. 400

$$\Rightarrow 10\% \text{ of } x = \text{Rs. } 400$$

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

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

$$\Rightarrow x = 4,000$$

Hence, Meera's salary is Rs. 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: Number of matches played by cricket team = 20

Percentage of won matches = 25%

$$\text{Total matches won by them} = 25\% \text{ of } 20 = \frac{25}{100} \times 20 = 5$$

Hence, they won 5 matches.