## **Comparing Quantities: Exercise 8.2**

(d) 2/7

**Q.1** Convert the given fractional numbers to per cents.

(a) 1/8 Sol:

**(b)** 5/4

For converting a fraction into a percentage, we need to multiply the fraction by 100.

(c) 3/40

(a) Given Fraction: 1/8  $(1/8) \ge 100\% = (100/8)\%$ = 12.5 %

(b) Given Fraction: 5/4  $(5/4) \ge 100\% = (500/4)\%$ = 125 %

(c) Given Fraction: 3/40  $(3/40) \times 100\% = (300/40)\%$ = 7.5 %

(d) Given Fraction: 2/7  $(2/7) \times 100 \% = (200/7) \%$ 

 $= 28\frac{4}{7} \%$ 

Q.2 Convert the given decimal fractions to per cents. (a) 0.65 (c) 0.02(b) 2.1 (d) 12.35 Sol: For converting a decimal fraction into a percentage, we need to firstly remove decimal then multiply the fraction by 100.

(a) Given decimal: 0.65

Firstly remove decimal, 0.65 = 65/100And now multiply by 100,  $(65/100) \ge 100\% = 65\%$ 

(b) Given decimal: 2.1

Firstly remove decimal, 2.1 = 21/10And now multiply by 100,  $(21/10) \times 100 \% = 210 \%$ (c) Given decimal: 0.02 Firstly remove decimal, 0.02 = 2/100And now multiply by 100,  $(2/100) \times 100 \% = 2 \%$ 

(d) Given decimal: 12.35

Firstly remove decimal, 12.35 = 1235/100 And now multiply by 100,  $(1235/100) \times 100 \% = 1235 \%$ 

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



From the figure we can see clearly that out of four equal parts, only one part is shaded. So, its fraction form =  $\frac{1}{4}$ 

Now in percentage form, (1/4) x 100 % = (100/4) %

(ii) Given figure:



From the figure we can see clearly that out of five equal parts, only three parts are shaded. So, its fraction form = (3/5)

Now in percentage form,  $(3/5) \times 100 \% = (300/5) \% = 60 \%$ 

(iii) Given figure:



From the figure we can see clearly that out of eight equal parts, only three parts are shaded. So, its fraction form = (3/8)Now in percentage form,  $(3/8) \ge (300/8) \%$ 

Q.4 Find: (a) 15% of 250 (b) 1% of 1 hour (c) 20% of ₹ 2500 Sol: (a) Given: 15% of 250 =  $(15/100) \times 250$ = 3750/100 = 37.50

(b) Given: 1% of 1 hour Since, 1 hour = 60 min. And 1 min. = 60 seconds 60 min. = 60 x 60 = 3600 seconds So, 1% of 60 min = (1/100) x 3600 min = 3600/100 = 36 seconds

(c) Given: 20% of ₹ 2500 = (20/100) x 2500 = ₹ (50000/100) = ₹ 500

(d) Given: 75% of 1 kg Since, 1 kg = 1000g So, 75% of 1000g = (75/100) x 1000g = 75000/100 g = 750 g

## Q.5 Find the whole quantity if (a) 5% of it is 600. (b) 12% of it is ₹1080. (d) 70% of it is 14 minutes. Sol: (a) Given: 5% of it is 600.

(a) Given: 5% of it is 600. Let *a* be the whole quantity,  $(5/100) \times a = 600$ a = (60000/5)a = 12000

(b) Given: 12% of it is ₹1080. Let *a* be the whole quantity,  $(12/100) \times a = ₹1080$ a = ₹ (108000/12)a = ₹ 9000

(c) Given: 40% of it is 500 km. Let *a* be the whole quantity,  $(40/100) \times a = 500$  km a = (50000/40)a = 1250 km

(d) Given: 70% of it is 14 minutes. Let *a* be the whole quantity,  $(70/100) \times a = 14$  min. a = (1400/70) min. a = 20 min. (c) 40% of it is 500 km. (e) 8% of it is 40 litres. (e) Given: 8% of it is 40 litres. Let *a* be the whole quantity, (8/100) × *a* = 40 litres. *a* = (4000/8) litres. *a* = 500 litres.

Q.6 Convert given per cents to decimal fractions and also to fractions in simplest forms:(a) 25%(b) 150%(c) 20%(d) 5%Sol: Firstly we need to convert the percentage into fraction and then convert the fraction into decimal form.

(a) Given percent: 25% 25% = 25/100 = 0.25

(b) Given percent: 150% 150% = 150/100 = 1.50

(c) Given percent: 20% 20% = 20/100 = 0.20

(d) Given percent: 5% 5% = 5/100 = 0.05

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

**Sol:** Given: In a city, Percentage of female = 30%Percentage of male = 40%Total percentage of male and female = 40% + 30%= 70%So, the percentage of children = 100 - 70= 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: Given: In a constituency, total number of voters = 15000 Percentage of voters = 60% So, percentage of voters who did not vote = 100 - 60 = 40% Therefore, number of voters who did not vote = 40% of 15000 =  $(40/100) \times 15000$ = 600000/100= 60000 votersThus, 6000 voters did not vote.

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

**Sol:** Let ₹ *a* be the Meeta's salary, So, 10% of ₹ *a* = ₹ 400 (10/100) × (*a*) = 400 *a* = 400 × (100/10) *a* = 400 × 10 *a* = ₹ 4000 Thus, Meeta's salary = ₹ 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:** Given: A local cricket team played number of matches = 20 matches And percentage of matches won by the local team = 25%So, number of matches won = 25% of 20 =  $(25/100) \times 20$ = 500/100

= 500/100= 5 matches.

Thus, local team won number of matches out of 20 matches = 5 matches