

EXERCISE 8.2

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1. Convert the given fractional numbers to percent.**(a) $\frac{1}{8}$** **Solution:-**

In order to convert a fraction into a percentage multiply the fraction by 100 and put the percent sign %.

$$\begin{aligned} &= \left(\frac{1}{8}\right) \times 100 \% \\ &= 100/8 \% \\ &= 12.5\% \end{aligned}$$

(b) $\frac{5}{4}$ **Solution:-**

In order to convert a fraction into a percentage multiply the fraction by 100 and put the percent sign %.

$$\begin{aligned} &= \left(\frac{5}{4}\right) \times 100 \% \\ &= 500/4 \% \\ &= 125\% \end{aligned}$$

(c) $\frac{3}{40}$ **Solution:-**

In order to convert a fraction into a percentage multiply the fraction by 100 and put the percent sign %.

$$\begin{aligned} &= \left(\frac{3}{40}\right) \times 100 \% \\ &= 300/40 \% \\ &= 30/4 \% \\ &= 7.5\% \end{aligned}$$

(d) $\frac{2}{7}$ **Solution:-**

In order to convert a fraction into a percentage multiply the fraction by 100 and put the percent sign %.

$$\begin{aligned} &= \left(\frac{2}{7}\right) \times 100 \% \\ &= 200/7 \% \\ &= 28\frac{4}{7}\% \end{aligned}$$

2. Convert the given decimal fraction to percent.**(a) 0.65****Solution:-**

First we have to remove the decimal point,
 $= 65/100$

Now,

Multiply by 100 and put the percent sign %.

We have,

$$= (65/100) \times 100$$
$$= 65\%$$

(b) 2.1**Solution:-**

First we have to remove the decimal point,
 $= 21/10$

Now,

Multiply by 100 and put the percent sign %.

We have,

$$= (21/10) \times 100$$
$$= 210\%$$

(c) 0.02**Solution:-**

First we have to remove the decimal point,
 $= 2/100$

Now,

Multiply 100 and put the percent sign %.

We have,

$$= (2/100) \times 100$$
$$= 2\%$$

(d) 12.35**Solution:-**

First we have to remove the decimal point,
 $= 1235/100$

Now,

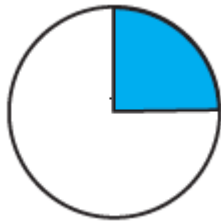
Multiply by 100 and put the percent sign %.

We have,

$$\begin{aligned} &= (1235/100) \times 100 \\ &= 1235\% \end{aligned}$$

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

(i)



Solution:-

By observing the given figure,

We can able to identify that 1 part is shaded out of 4 equal parts.

It is represented by a fraction = $\frac{1}{4}$

Then,

$$\begin{aligned} &= \frac{1}{4} \times 100 \\ &= 100/4 \\ &= 25\% \end{aligned}$$

Hence, 25% of figure is coloured.

(ii)



Solution:-

By observing the given figure,

We can able to identify that 3 part is shaded out of 5 equal parts.

It is represented by a fraction = $\frac{3}{5}$

Then,

$$\begin{aligned} &= (\frac{3}{5}) \times 100 \\ &= 300/5 \\ &= 60\% \end{aligned}$$

Hence, 60% of figure is coloured.

(iii)

**Solution:-**

By observing the given figure,

We can able to identify that 3 part is shaded out of 8 equal parts.

It is represented by a fraction = $\frac{3}{8}$

Then,

$$= \left(\frac{3}{8}\right) \times 100$$

$$= \frac{300}{8}$$

$$= 37.5\%$$

Hence, 37.5% of figure is coloured.

4. Find:**(a) 15% of 250****Solution:-**

We have,

$$= \left(\frac{15}{100}\right) \times 250$$

$$= \left(\frac{15}{10}\right) \times 25$$

$$= \left(\frac{15}{2}\right) \times 5$$

$$= \left(\frac{75}{2}\right)$$

$$= 37.5$$

(b) 1% of 1 hour**Solution:-**

We know that, 1 hour = 60 minutes

Then,

$$1\% \text{ of } 60 \text{ minutes}$$

$$1 \text{ minute} = 60 \text{ seconds}$$

$$60 \text{ minutes} = 60 \times 60 = 3600 \text{ seconds}$$

Now,

$$1\% \text{ of } 3600 \text{ seconds}$$

$$= \left(\frac{1}{100}\right) \times 3600$$

$$= 1 \times 36$$

= 36 seconds

(c) 20% of ₹ 2500

Solution:-

We have,

$$\begin{aligned} &= (20/100) \times 2500 \\ &= 20 \times 25 \\ &= ₹ 500 \end{aligned}$$

(d) 75% of 1 kg

Solution:-

We know that, 1 kg = 1000 g

Then,

$$\begin{aligned} &75\% \text{ of } 1000 \text{ g} \\ &= (75/100) \times 1000 \\ &= 75 \times 10 \\ &= 750 \text{ g} \end{aligned}$$

5. Find the whole quantity if

(a) 5% of it is 600

Solution:-

Let us assume the whole quantity be x,

Then,

$$\begin{aligned} (5/100) \times (x) &= 600 \\ X &= 600 \times (100/5) \\ X &= 60000/5 \\ X &= 12000 \end{aligned}$$

(b) 12% of it is ₹ 1080.

Solution:-

Let us assume the whole quantity be x,

Then,

$$\begin{aligned} (12/100) \times (x) &= 1080 \\ X &= 1080 \times (100/12) \\ X &= 540 \times (100/6) \\ X &= 90 \times 100 \\ X &= ₹ 9000 \end{aligned}$$

(c) 40% of it is 500k km

Solution:-

Let us assume the whole quantity be x,

Then,

$$(40/100) \times (x) = 500$$

$$X = 500 \times (100/40)$$

$$X = 500 \times (10/4)$$

$$X = 500 \times 2.5$$

$$X = 1250 \text{ km}$$

(d) 70% of it is 14 minutes

Solution:-

Let us assume the whole quantity be x,

Then,

$$(70/100) \times (x) = 14$$

$$X = 14 \times (100/70)$$

$$X = 14 \times (10/7)$$

$$X = 20 \text{ minutes}$$

(e) 8% of it is 40 liters

Solution:-

Let us assume the whole quantity be x,

Then,

$$(8/100) \times (x) = 40$$

$$X = 40 \times (100/8)$$

$$X = 40 \times (100/8)$$

$$X = 40 \times 12.5$$

$$X = 500 \text{ liters}$$

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

(a) 25%

Solution:-

First convert the given percentage into fraction and then put the fraction into decimal form.

$$= (25/100)$$

$$= \frac{1}{4}$$

$$= 0.25$$

(b) 150%**Solution:-**

First convert the given percentage into fraction and then put the fraction into decimal form.

$$\begin{aligned} &= (150/100) \\ &= 3/2 \\ &= 1.5 \end{aligned}$$

(c) 20%**Solution:-**

First convert the given percentage into fraction and then put the fraction into decimal form.

$$\begin{aligned} &= (20/100) \\ &= 1/5 \\ &= 0.2 \end{aligned}$$

(d) 5%**Solution:-**

First convert the given percentage into fraction and then put the fraction into decimal form.

$$\begin{aligned} &= (5/100) \\ &= 1/20 \\ &= 0.05 \end{aligned}$$

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

From the question, it is given that

Percentage of female in a city = 30%

Percentage of male in a city = 40%

Total percentage of male and female both = 40% + 30%
= 70%

Now we have to find the percentage of children = 100 – 70
= 30%

So, 30% are children.

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?

Solution:-

From the question, it is given that

Total number of voters in the constituency = 15000

Percentage of people who voted in the election = 60%

Percentage of people who did not voted in the election = $100 - 60$
 $= 40\%$

Total number of voters who did not voted in the election = 40% of 15000
 $= (40/100) \times 15000$
 $= 0.4 \times 15000$
 $= 6000$ voters

\therefore 6000 voters did not vote.

9. Meeta saves ₹ 4000 from her salary. If this is 10% of her salary. What is her salary?

Solution:-

Let us assume Meeta's salary be ₹ x,

Then,

$$\begin{aligned}10\% \text{ of } ₹ x &= ₹ 4000 \\(10/100) \times (x) &= 4000 \\X &= 4000 \times (100/10) \\X &= 4000 \times 10 \\X &= ₹ 40000\end{aligned}$$

\therefore Meeta's salary is ₹ 40000.

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

Solution:-

From the question, it is given that

Total matches played by a local team = 20

Percentage of matches won by the local team = 25%

Then,

Number of matches won by the team = 25% of 20
 $= (25/100) \times 20$
 $= 25/5$
 $= 5$ matches.

\therefore The local team won 5 matches out of 20 matches.