ODM EDUCATIONAL GROUP
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PERCENT AND PERCENTAGE

PERIOD 2

SUBJECT : MATHEMATICS
CHAPTER NUMBER: 7
CHAPTER NAME : PERCENT AND PERCENTAGE

Website: www.odmegroup.org
Email: info@odmps.org
Toll Free: 1800 120 2316
Sishu Vihar, Infocity Road, Patia, Bhubaneswar- 751024

Learning outcome

The children will be able calculate simple ***percentage*** problems.

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Previous knowledge:

1) Find :
   (i) 45 is what percent of 54?
   (ii) 2.7 is what percent of 18?
2) (i) 252 is 35% of a certain number, find the number.
   (ii) If 14% of a number is 315; find the number
3) Find the percentage change, when a number is changed from :
   (i) 80 to 100
   (ii) 100 to 80
   (iii) 6.25 to 7.50

Exercise-7(A)

10) (i) A number 3.625 is wrongly read as 3.265; find the percentage error.
(ii) A number 5.78×10^3 is wrongly written as 5.87×10^3; find the percentage error

Exercise-7(A)

(*i*) Correct number $= 3{\cdot}625$

Number wrongly read as $= 3{\cdot}265$

Error $= 3{\cdot}625 - 3{\cdot}265$

$= 0{\cdot}360$

$$\% \text{ Error} = \frac{0{\cdot}360}{3{\cdot}625} \times 100$$

$$= \frac{360}{3625} \times 100 = \frac{36000}{3625} = 9{\cdot}93\% \text{ Ans.}$$

(*ii*) Correct number $= 5{\cdot}78 \times 10^3$

Number wrongly written as $= 5{\cdot}87 \times 10^3$

Error $= 5{\cdot}87 \times 10^3 - 5{\cdot}78 \times 10^3$

$= 0{\cdot}09 \times 10^3$

$$\% \text{ Error} = \frac{0{\cdot}09 \times 10^3}{5{\cdot}78 \times 10^3} \times 100$$

$$= \frac{0{\cdot}09}{5{\cdot}78} \times 100 = \frac{9}{578} \times 100 = \frac{900}{578}\%$$

$= 1{\cdot}56\%$

Exercise-7(A)

Question 11.

In an election between two candidates, one candidate secured 58% of the votes polled and won the election by 18, 336 votes. Find the total number of votes polled and the votes secured by each candidate.

Exercise-7(A)

Since, winning candidate secured 58% of the votes polled.

$\therefore$ Losing candidate secured

$= (100 - 58)\%$ of the votes polled

$= 42\%$ of the votes polled

Difference of votes $= 58 - 42$

$= 16\%$ of the votes polled

We are given :

16% of votes polled $= 18{,}336$

$\Rightarrow \quad \frac{16}{100}$ of votes polled $= 18{,}336$

$\Rightarrow \quad$ Votes polled $= 18{,}336 \times \frac{100}{16}$

$\Rightarrow \quad$ Votes polled $= \frac{18{,}33{,}600}{16}$

$\Rightarrow \quad$ Votes polled $= 1{,}14{,}600$

Exercise-7(A)

Question 15.
In an examination, a candidate secured 125 marks and failed by 15 marks. If the pass percentage was 35 %; find the maximum marks.

Exercise-7(A)

Total marks secured = 125

Failed by 15 marks

$\therefore$ Pass marks = 125 + 15 = 140

Let Maximum marks = x

$$\therefore \quad \frac{x \times 35}{100} = 140$$

$$\Rightarrow \qquad x = \frac{140 \times 100}{35} = 4 \times 100 = 400$$

Hence maximum marks = 400

Exercise-7(A)

Question 17.
The number 8,000 is first increased by 20% and then decreased by 20%. Find the resulting number.

Exercise-7(A)

$$\text{The resulting number} = \text{The original number} \times \left(1+\frac{20}{100}\right) \times \left(1-\frac{20}{100}\right)$$

$$= 8000 \times \frac{120}{100} \times \frac{80}{100} = 7{,}680$$

Exercise-7(A)

Question 18.
The number 12,000 is first decreased by 25% and then increased by 25%. Find the resulting number.

Exercise-7(A)

$$\text{The resulting} = \text{The original number} \times \left(1-\frac{25}{100}\right) \times \left(1+\frac{25}{100}\right)$$

$$= 12000 \times \frac{75}{100} \times \frac{125}{100} = 11{,}250$$

Home Assignment

Exercise 7(A) - 15 to 20

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THANKING YOU

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