

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.

Ans - (i) correct number = 3.625

number wrongly read as = 3.265

$$\text{Error} = 3.625 - 3.265 = 0.360$$

$$\% \text{ error} = \frac{0.360}{3.625} \times 100 = \frac{360}{3625} \times 100 = \frac{36000}{3625}$$

$$= \frac{36000}{3625} = 9.93\% \text{ Ans.}$$

(ii) correct number = 5.78×10^3
 Number wrongly written as = 5.87×10^3
 Error = $5.87 \times 10^3 - 5.78 \times 10^3$
 $= 0.09 \times 10^3$
 $\% \text{ Error} = \frac{0.09 \times 10^3}{5.78 \times 10^3} \times 100 = \frac{0.09 \times 100}{5.78} \times 100$
 $= \frac{900}{578} \% = 1.56 \%$

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 secured by each candidate.

Ans -> 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

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

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

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

\Rightarrow votes polled = 1,14,600

\therefore votes secured by winning candidate

$= \frac{58}{100} \times 1,14,600$

$= 66,468$

voter secured by losing candidate
 $= \frac{42}{100} \times 1,14,600$
 $= 48,132$

votes polled = 1,14,600

votes secured by winning candidate = 66,468
 votes secured by losing candidate = 48,132

12) In an election between two candidates, one candidate secured 41% of votes polled and lost the election by 12,366 votes. Find the total votes polled and the votes secured by the winning candidate.

Ans → Since, the losing candidate secured 41% of the votes polled

winning candidate secures votes

= (100 - 41)% of the votes polled

= 59% of the votes polled

Difference of votes = 59 - 41

= 18% of the votes polled

We are given:

18% of the votes polled = 12,366

⇒ $\frac{18}{100}$ of the votes polled = 12,366

⇒ votes polled = $12,366 \times \frac{100}{18}$

⇒ $\frac{1236600}{18} = 2,06,100$

votes secured by winning candidate

= $\frac{59}{100} \times 2,06,100 = 1,09,233$

∴ votes polled = 2,06,100

votes secured by winning candidate = 1,09,233

Q13) The cost of a scooter depreciates every year by 15% of its value at the beginning of the year. If the present cost of the scooter is ₹8000 Find its cost.

(i) after one year

(ii) after 2 years

Ans → Present cost of scooter = ₹8000

The cost of scooter depreciates by 15% every year.

(i) cost of scooter after one year

$$= \frac{(100-15)}{100} \times 8000 = \frac{85}{100} \times 8000 = \text{₹}6800$$

(ii) cost of scooter after 2 years

$$= \frac{(100-15)}{100} \times 6800 = \frac{85}{100} \times 6800 = \text{₹}5780$$

Q14) In an examination, the pass mark is 40%. If a candidate gets 65 marks and fails by 3 marks; find the maximum marks.

Ans → marks obtained by the candidate = 65

fails by = 3 marks

$$\text{pass marks} = 65 + 3 = 68$$

$$\% \text{ of pass marks} = 40\%$$

$$\therefore \text{Required maximum marks} = \frac{100}{40} \times 68$$

$$= \text{10} \times 17$$

$$= 170$$