4.00
30/9/21

Ex- 7(c)

8. Maths percentage = $\frac{120}{150} \times 100 = 80\%$

English Percentage = $\frac{136}{200} \times 100 = 68\%$

Science Percentage = $\frac{108}{150} \times 100 = 72\%$

Total number scored = 120 + 136 + 108 = 364
Maximum marks = 150 + 200 + 150 = 500

$\therefore$ Overall % = $\frac{364}{500} \times 100 = 72.8\%$

9. Let age of B = 100 years

$\therefore$ Age of A = $100 + 100 \times \frac{25}{100} = 125$ years

Difference in age by which A is other than B
= 125 − 100
= 25 years

$\therefore$ % by which B is younger than A = $\frac{25}{125} \times 100 = 20\%$

11. Total number of votes polled = 29200 + 58800 + 72000
= 160000

∴ Percentage of votes scored by winning candidate

$$= \frac{72000}{160000} \times 100 = 45\%$$

12. (i) Let the number be x.

By the given conditions,

$$x + \frac{23x}{100} = 861$$

$$\Rightarrow \frac{100x + 23x}{100} = 861$$

$$\Rightarrow x\left(\frac{123}{100}\right) = 861$$

$$\Rightarrow x = \frac{861 \times 100}{123} = 700$$

∴ Required number = 700

(ii) Let the number = 100

By the given condition.

$$x - \frac{x \times 16}{100} = 798$$

$$\Rightarrow \frac{100x - 16x}{100} = 798$$

$$\Rightarrow \frac{84x}{100} = 798$$

$$\Rightarrow 6x = \frac{798 \times 100}{84} = \frac{114 \times 100}{12} = 950$$

$\therefore$ So the required number is 950.

13. Let price of x kg of sugar = ₹100

Increase in price = 20%

$\therefore$ New Price = 100 + 20 = ₹120

$\therefore$ For ₹120, sugar obtained = x kg

For ₹100, sugar obtained $= \frac{x}{120} \times 100 = \frac{5x}{6}$ kg

Original consumption = x kg

New consumption = $\frac{5x}{6}$ kg

Decrease in consumption $= x - \frac{5x}{6} = \frac{x}{6}$

Required % of decrease in consumption

$$= \frac{\frac{x}{6}}{x} \times 100 = \frac{x}{6x} \times 100 = \frac{100}{6_3} = \frac{50}{3} = 16\frac{2}{3}\%$$

Ex-8 (A)

6. Gain $= \frac{1}{6}$ of $(3600) = \frac{1}{6} \times 3600 = ₹600$

(i) Thus again $= ₹600$

(ii) CP $= 3600 - 600$
$= ₹3000$

(iii) Gain % $= \frac{600}{3000} \times 100 = 20\%$

15. (i) Let CP of Radio set $= ₹x$

Gain $= ₹x$

$$S.P = ₹\left(x + \frac{x}{9}\right) = \left(\frac{9x + x}{9}\right) = ₹\frac{10x}{9}$$

But we are given SP of the set radio $= ₹250$

15

$$\frac{10x}{9} = 250$$

$$\Rightarrow x = 250 \times \frac{9}{10} \Rightarrow x = ₹225$$

(ii) Profit = $₹\frac{x}{9}$

$$= ₹\frac{225}{9}$$

... Substituting the value of x

$$= ₹25$$

$$\text{Profit \%} = \frac{\text{Profit}}{CP} \times 100$$

$$= \frac{25}{\frac{225}{9}} \times 100 = \frac{100}{9}\% = 11\frac{1}{9}\%$$

Ex- 8(b)

11. Let CP of the scooter for Rajesh = ₹100x

SP for Rajesh = $\frac{100x \times 92}{100} = 92x$

This will be CP for Rahim = 92x, Gain = 5%.

SP for Rahim = $\frac{92x \times 105}{100}$

$= \frac{966x}{10}$

This will be CP for Prem = ₹14490

$\frac{966x}{10} = 14490$

$\Rightarrow x = \frac{14490}{966} \times 10 = 150$

(i) CP of scooter for Rahim = $92x = 92 \times 150$

= ₹13800

SP of scooter for Rahim = $\frac{966x}{10} = \frac{966}{10} \times 150$

$= (966 \times 15) =$ ₹14490

(ii) CP of scooter for Rajesh $= 100x = 100 \times 150$

$= 100 \times 150$

$= ₹15000$

SP of scooter for Rajesh $= 92x \ (92 \times 150)$

$= ₹13800$

12. Mohan paid for articles = ₹912

Peter sold the article to Mohan

For Peter

SP = ₹912, Loss = 5%

$$CP = \frac{100}{(100-L\%)} \times SP$$

$$= \frac{100}{(100-5)} \times 912$$

$$= \frac{\overset{20}{\cancel{100}}}{\underset{19}{\cancel{95}}} \times \overset{48}{\cancel{912}} = 20 \times 48$$

$= ₹960$

John sold the same article to ~~peter~~ Peter

For John:

SP = ₹960

Profit = 20%

$$CP = \frac{100}{(100+Px)} \times SP$$

$$= \frac{100}{(100+20)} \times 960$$

$$= \frac{100}{120} \times \overset{8}{\cancel{960}}$$

$$= ₹800$$

Hence, John paid for the article = ₹800