

⑧ In an examination, Kavita scored 120 out of 150 in maths, 136 out of 200 in English and 108 out of 150 in science. Find her percentage score in each subject and also on the whole (aggregate).

$$\rightarrow \text{percentage of Maths} = \frac{120}{150} \times 100 = 80\%$$

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

$$\text{Percentage of science} = \frac{108}{150} \times 100 = 72\%$$

$$\text{Total percentage} = 72.8\% \cdot \frac{(120 + 136 + 108)}{(150 + 150 + 200)} = \frac{364}{500} \times 100 = 72.8\%$$

⑨ A is 25% older than B. By what percent is B younger than A?

\rightarrow Let the age of B be = 100.

$$\therefore \text{A's age} = 100 + 25 = 125$$

$$\text{Required percentage} = \frac{\text{change}}{\text{original}} \times 100 = \frac{125 - 100}{100} \times 100$$

$$= \frac{25}{100} \times 100 = 25\%$$

- (11) In an election, three candidates contested and secured 29200, 58800, and 72000 votes. Find the percentage of votes scored by the winning candidate.

$$\rightarrow \text{Total votes} = 29200 + 58800 + 72000 = 160000$$

$$\text{Required percentage} = \frac{72000}{160000} \times 100 = \frac{720}{16} = \frac{90}{2} = 45\%$$

So, the percentage is = 45%.

- (12) (i) A number when increased by 23% becomes 861, find the number.

$$\rightarrow 123x = 861$$

$$\frac{100}{7}$$

$$= 123x = 861 \times 100$$

$$= x = 700$$

- (ii) A number when decreased by 16% comes 798; find the number.

$$\rightarrow 84x = 798$$

$$\frac{100}{7.5}$$

$$= 84x = 798 \times 100$$

$$= x = 950$$

(13) The price of sugar is increased by 20%. By what percent must the ~~cost~~ consumption of sugar be decreased so that the expenditure on sugar may remain the same?

→ Let the original price of the sugar be 100.
Price ↑ by 20%, So new cost/price = ₹ 120

$$= \frac{120-100}{120} \times 100 = \frac{200}{12} \times \frac{50}{3} = 16.6\% = 16\frac{2}{3}\%$$