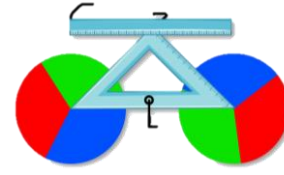


MATHSGYM

CH-8 Percentage & its Applications

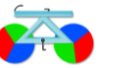
maths is fun



CBSE CLASS 8 Percentage & Its Applications

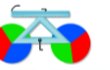
FORMULAE – v1

Dt: 21/01/2022



INCREASE OR DECREASE AS %

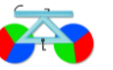
1. Increase % = $\frac{\text{Increased Value}}{\text{Original Value}} \times 100$
2. Decrease % = $\frac{\text{Decreased Value}}{\text{Original Value}} \times 100$



Increase & then decrease by same %

If a number is increased & then decreased by $x\%$. Then

3. The **original number** always **finally decreases** by $\left(\frac{x}{10}\right)^2 \%$



S.P, C.P., PROFIT & LOSS

- If $S.P. > C.P$, you have profit

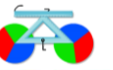
4. Profit = $S.P. - C.P$

5. Profit in % = $\left(\frac{\text{Profit}}{C.P} \times 100\right) \%$

- If $S.P. < C.P$, you have Loss

6. Loss = $C.P - S.P.$

7. Loss in % = $\left(\frac{\text{Loss}}{C.P} \times 100\right) \%$



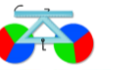
S.P, C.P., PROFIT & LOSS

$$8. \text{ S. P.} = \left(\frac{100 + \text{Profit \%}}{100} \right) \times \text{C. P}$$

$$9. \text{ S. P.} = \left(\frac{100 - \text{Loss \%}}{100} \right) \times \text{C. P}$$

$$10. \text{ C. P.} = \left(\frac{100\%}{100 + \text{Profit \%}} \right) \times \text{S. P}$$

$$11. \text{ C. P.} = \left(\frac{100 \%}{100 - \text{Loss \%}} \right) \times \text{S. P}$$



DISCOUNT

12. The price written on the label of an article is called its **marked price** or **list price**.

13. The rebate on the marked price is called **discount**.

14. Discount is always calculated on the **marked price**.

$$15. \text{Discount \%} = \frac{\text{Discount}}{\text{M.P}} \times 100$$

$$16. \text{Discount value} = \text{Discount\%} \times \text{Marked Price}$$

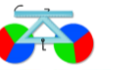
$$17. \text{Discount} = \text{M.P.} - \text{S.P.}$$

$$18. \text{S.P.} = \text{M.P.} - \text{Discount}$$

$$19. \text{M.P.} = \text{S.P.} + \text{Discount}$$

$$20. \text{S.P.} = \left(\frac{100 - \text{Discount \%}}{100} \right) \times \text{M.P}$$

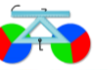
$$21. \text{M.P.} = \left(\frac{100}{100 - \text{Discount \%}} \right) \times \text{S.P}$$



SUCCESSIVE DISCOUNT

22. S.P. after second discount

- = $[(100\% - 2^{\text{nd}} \text{ Discount } \%) \text{ of } (100\% - 1^{\text{st}} \text{ discount}\%)] \text{ of M.P.}$
- = $[(100\% - 2^{\text{nd}} \text{ Discount } \%) \times (100\% - 1^{\text{st}} \text{ discount}\%)] \times \text{M.P.}$



TAX

- Tax is the money collected by the government from the citizens in order to provide them with the services.

23. Tax is always calculated on S.P. (or Total S.P).