**CBSE Class 8 Mathematics**
**Revision Notes**
**Chapter – 8**
**Comparing Quantities**

- **Ratio**: Comparing by division is called ratio. Quantities written in ratio have the same unit. Ratio has no unit. Equality of two ratios is called proportion.
- Product of extremes = Product of means
- **Percentage**: Percentage means for every hundred. The result of any division in which the divisor is 100 is a percentage. The divisor is denoted by a special symbol %, read as percent.
- **Profit and Loss**:

  (i) **Cost Price** (CP): The amount for which an article is bought.

  (ii) **Selling Price (SP):** The amount for which an article is sold.
- Additional expenses made after buying an article are included in the cost price and are known as **overhead expenses**. These may include expenses like amount spent on repairs, labour charges, transportation, etc.
- **Discount** is a reduction given on marked price. Discount = Marked Price – Sale Price.
- Discount can be calculated when discount percentage is given. Discount = Discount % of Marked Price
- Additional expenses made after buying an article are included in the cost price and are known as **overhead expenses.** CP = Buying price + Overhead expenses
- Sales tax is charged on the sale of an item by the government and is added to the Bill Amount. Sales tax = Tax% of Bill Amount
- **Simple Interest**: If the principal remains the same for the entire loan period, then the interest paid is called simple interest. $SI = \frac{P \times R \times T}{100}$
- Compound interest is the interest calculated on the previous year's amount (A = P + I)

  (i) Amount when interest is compounded annually $= P(1 + \frac{R}{100})^n$ P is principal, R is rate of interest, n is time period

  (ii) Amount when interest is compounded half yearly

  $= P(1 + \frac{R}{100})^{2n} [\frac{R}{2} is, \ half \ yearly \ rate \ and \ 2n = number \ of \ 'half - years'$