**IMPORTANT FORMULA AND EQUATION**

1. **Partnership:**

   When two or more than two persons run a business jointly, they are called partners and the deal is known as partnership.

2. **Ratio of Divisions of Gains:**

   I. When investments of all the partners are for the same time, the gain or loss is distributed among the partners in the ratio of their investments.

   Suppose A and B invest Rs. \(x\) and Rs. \(y\) respectively for a year in a business, then at the end of the year:

   \[(A’s \text{ share of profit}) : (B’s \text{ share of profit}) = x : y \, .\]

   II. When investments are for different time periods, then equivalent capitals are calculated for a unit of time by taking (capital × number of units of time). Now gain or loss is divided in the ratio of these capitals.

   Suppose A invests Rs. \(x\) for \(p\) months and B invests Rs. \(y\) for \(q\) months then,

   \[(A’s \text{ share of profit}) : (B’s \text{ share of profit}) = xp : yq \, .\]

3. **Working and Sleeping Partners:**

   A partner who manages the the business is known as a working partner and the one who simply invests the money is a sleeping partner.

---

**KEY POINTS:**

**Partnership:**

When two or more than two persons agree to invest money to run a business jointly, this association or deal is called partnership and those who invest money are called partners. The total investment is called the capital.

**Kind of partners:**

There are two kinds of partners.

1. **Working or active partner:**

When a partner devotes his time for the business in addition to invest his money, he is called a
working partner. With mutual agreement, the active partners get some fixed percentage of profit as working allowance.

2. Sleeping or non-active partner
A partner who simply invests money, but does not attend to the business is called a sleeping partner.

Kinds Of Partnership :

1. Simple partnership
If the capitals of several partners are invested for the same period. It is called a simple partnership.

2. Compound or complex partnership :
If the capitals of the partners are invested for different intervals of time, the partnership is called compound or complex.

Key notes

- If the capitals of two partners are invested for the same duration of period and let $A_1$ and $A_2$ be their investments and total profit is Rs. $P$, then share of the partners in the profits are
  $$\frac{A_1 \times P}{A_1 + A_2} \text{ and } \frac{A_2 \times P}{A_1 + A_2}.$$ Rs.

If the capitals of two partners be Rs. $A_1$ and $A_2$ for the periods $t_1$ and $t_2$ respectively and the profit be Rs. $P$, then shares of the partners in the profit are Rs.