

CHAPTER 10

Direct and Inverse Proportions

The importance of ratio and proportion:

Who doesn't like Hyderabad Biryani?

Can your mother prepare delicious and mouth-watering biryani, only with Basmati Rice?

Obviously, no as, she has to add different ingredients to make it tasty and unforgettable. These ingredients should be added in the required quantities (or) proportions and cooked. Then only the tasty biryani can be enjoyed.

Proportion:

An equality relation between two ratios is called the 'Proportion'.

Example:

The ratio of 20 roses and 30 lilies is 20 : 30 is same as 2 : 3.

So, $20 : 30 = 2 : 3$

We write this as two equivalent fractions, $\frac{20}{30} = \frac{2}{3}$

Here, 20, 30, 2 and 3 are said to be in proportion.

Note:

If a, b, c and d are in proportion then

$$a : b = c : d$$

(or)

$$\frac{a}{b} = \frac{c}{d}$$

(or)

$$ad = bc \text{ (By cross multiplication)}$$

