# IMPORTANT FACTS AND FORMULAE

1. Alligation: It is the rule that enables us to find the ratio in which two or more ingredients at the given price must be mixed to produce a mixture of a desired price.

2. Mean Price: The cost price of a unit quantity of the mixture is called the mean price.

3. Rule of Alligation: If two ingredients are mixed, then

(Quantity of cheaper) = (C.P. of dearer) - (Mean price)
(Quantity of dearer)   (Mean price) - (C.P. of cheaper)

We present as under:

C.P. of a unit quantity of cheaper   C.P. of a unit quantity of dearer
  (c)   (d)

(m)
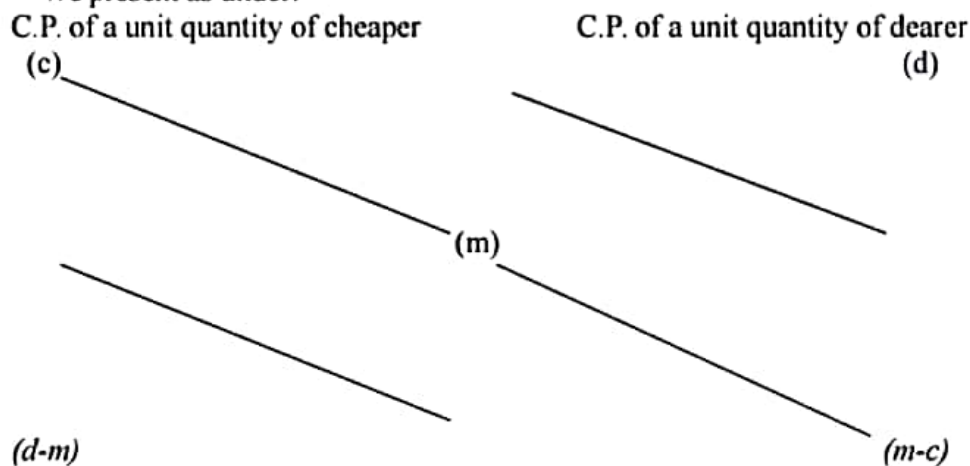
(d-m)   *(m-c)*

(Cheaper quantity) : (Dearer quantity) = (d - m) : (m - *c*).

4. Suppose a container contains x units of liquid from which y units are taken out and replaced by water. After n operations the quantity of pure liquid $= \left[x(1-y/x)^n \right]$ units.