

Chapter 14



Factorisation

Factorisation by regrouping terms:

Regrouping is done when the terms in an expression do not have a factor common to all of them. They are regrouped in such a way that we can find factors common to atleast two of the terms. Then, we factorise the given expression by taking out common factors in each group.

Example:

Factorise the expression $3a + bc + ac + 3b$ by regrouping terms?

PROCEDURE:

(i) Regroup the terms of the given expression such that each group has a common factor.

$3a + bc + ac + 3b$ can be regrouped as $(3a + 3b) + (bc + ac)$.

(ii) Take out the common factors from each group and factorise to get $(3a + 3b) + (bc + ac) = 3(a + b) + c(a + b)$.

(iii) Write the expression as a product by taking out the common factor from each of the factorised groups.

In $3(a + b) + c(a + b)$, $(a + b)$ is common

$$3(a + b) + c(a + b) = (a + b)(3 + c)$$

Therefore, the factors of $3a + bc + ac + 3b$ are $(a + b)$ and $(3 + c)$.

