



Math for the people, by the people.

multiply transitive

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Let G be a group, X a set on which it acts. Let $X^{(n)}$ be the set of order n -tuples of distinct elements of X . This is a G -set by the diagonal action:

$$g \cdot (x_1, \dots, x_n) = (g \cdot x_1, \dots, g \cdot x_n)$$

The action of G on X is said to be n -transitive if it acts transitively on $X^{(n)}$.

For example, the standard action of S^n , the symmetric group, is n -transitive, and the standard action of A_n , the alternating group, is $(n - 2)$ -transitive.