



Why**Definition**

The *translate* of a subset of a vector space *by* a given vector is the set of all vectors which are the sum of a vector in the subset with the given vector.

Notation

Let (V, \mathbf{F}) be a vector space. Let $M \subset V$ and $a \in V$. The translate of M by a is the set

$$\{x + a \mid x \in M\},$$

which we denote by $M + a$.

