

## TRANSLATE SETS

## 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.

