



## Sum Sets

### 1 Why

TODO

### 2 Definition

The *sum* of two sets in a vector space is the set of points which can be expressed as the sum one vector from the first set and one vector from the second set.

Sometimes called *Minkowski sum* (true?).

#### 2.1 Notation

Let  $(V, \mathbf{F})$  be a vector space and let  $M_1, M_2 \subset V$ . Then the sum of  $M_1$  and  $M_2$  is

$$\{x_1 + x_2 \mid x_1 \in M_1, x_2 \in M_2\},$$

