

## AFFINE HULLS

## Why

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## **Definition**

The affine hull of a set in n-dimensional space is the intersection of the collection of affine sets which contain it.

## Notation

We denote the affine hull of S by aff s.

**Prop. 1.** The affine hull of  $S \subset \mathbb{R}^n$  consists of all vectors which can be expressed as

$$\lambda_1 x_1 + \lambda_2 x_2 \cdots + \lambda_m x_m$$

such that  $x_i \in S$  and  $\sum_i \lambda_i = 1$ .

<sup>&</sup>lt;sup>1</sup>Future editions will include.

