

**Source:** [\[KBe2020math530index\]](#)

#incomplete

## 1 | Overview

- Exists over a [\[KBe20math530refField\]](#) and it's two operations (primary: addition, and secondary: multiplication)

## 2 | Finite Dimensional Vector Spaces

- Notes originally based on Axler Linear Algebra Done Right 3rd addition chapter 2 | | | | Linear Combination | [\[KBe20math530refLinearCombination\]](#) Span | [\[KBe20math530refSpan\]](#) Polynomial | [\[KBrefPolynomial\]](#) ## #definition finite-dimensional vector space > some (finite length) list of vectors in it spans the space. (Axler 2.10) ### #definition infinite-dimensional vector space > A vector space that isn't finite dimensional