

#incomplete

## 1 | Overview

- Exists over a  $K$  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 |  $\text{Span}$  |  $\text{Polynomial}$  |  $\text{Linear Independence}$  ## #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