

#flo #hw

1 | Finite-Dimensional Vector Spaces

title: Review

F denotes \mathbb{R} or \mathbb{C} V denotes a [\[\[file:KBe20math530refVectorSpace.org\] \[KBe20math530refVectorSpace\]\]](https://kbe20math530refVectorSpace.org) over F

- lin alg does not focus on arbitrary vector spaces
- it focuses on finite-dimensional vector spaces!

title: learning objectives for the chapter

- span
- linear independence
- bases
- dimension

- **notation:**

- lists of vectors:

- * $(2,1,4), (3,2,5)$

- list len 2 of vectors in \mathbb{R}^3

- * n-tuples without surrounding parens

- linear combination

- a linear combination of x and y would be any expression of the form $ax + by$, where a and b are constants ~wiki
- multiply each element in a list of vectors by an element in F
- and then add them up!
- any relation between the element scalar and what's being multiplied? can the scalars repeat? #question
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