

#flo #hw

1 | Finite-Dimensional Vector Spaces

title: Review

F denotes \mathbb{R} or \mathbb{C}

V denotes a [\[\[file:KBe20math530refVectorSpace.org\]\]](http://file.KBe20math530refVectorSpace.org) [\[KBe20math530refVectorSpace\]](http://KBe20math530refVectorSpace) over F

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

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title: learning objectives for the chapter
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- 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
- *span*
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