Source: 2020MATH530/KBe2020math530floIndex.md

#flo #disorganized #incomplete

1 | **Administrative bits**

- Will present problems from 2.B and/or 2.C next week
- Mini quiz, stop yourself after an hour
- and give your subconscious a chance to think about things # #icr Axler2.C #source Axler Linear Algebra Done Right 2.C ## Polynomials are vectors

    - because you can add and scale them and they are kind of nice in general ## The box under 2.38

- You can't understand a vector space just by knowing the vectors inside

    - you also need to know the field that you are in
    - See 2.A ex5

- The field that you are over changes your dimension: usually we think of $\mathbb{C}$ as a vector space over $\mathbb{R}$, but in this class we think of it as over $\mathbb{C}$, which means dim $\mathbb{C} = 1$

1.1 | **Axler2.41**

- It's my question! See [KBe20math530floQuestions]

1.2 | **Axler2.42**

- #tip If it's a spanning list that's the right length, then it's a basis and therefore linearly independent.
- If it's a linearly independent list and it's the right length, then it's a basis and therefore spanning.