

#flo #disorganized #incomplete #inclass
*

1 | Proof... presentations?

in room, 317.

1.1 | up first, karen.

- 2B, 4
- proof by example?
 - uses the constraints given by the problem? then just, plug and chug?
 - * plug in knowns for free variables and solve the next?
- actually, not a proof! doesn't ask for one.
- free variables! that's the concept here.

if it's a set, use set notation! not words

- #review how to take notes on proof presentations.

1.2 | Anisha

- 2B, 5 going in order?
- ooh, we solved this already?
 - our solution:
 - * represent every x^2 as $x^2 + x^3$, then whenever you need x^2 , just subtract x^3
- seems similar up till here
- proves linear independence
 - just rearrange the constants and algebra it
- proves it spans
 - just proves you can reach x^2 from every $x^2 + x^3$
- didn't explicitly say things..
 - proved linear dependence, proved span,
 - but didn't say that these are the things need for a basis

precise. mathematical. notation! -jana

1.3 | **Malaika**

- 2.B, 7
- on the quiz!
- uhoh, she says it's false.
- wait a second.. we need at least 3 vectors.. 2 vecs can't possibly fit it...
- frick, messed that up.

1.4 | **Sophie**

- with the same problem!
 - $V = \mathbb{R}^4$
 - v_1 through v_4 as the standard basis. or not??
- dammit. shoulda seen that. thought that they were elements in the vectors.

1.5 | **Joshua**

- 2.B problem 8
- direct sum means intersection is zero,
- so when u add them together, u can just show it is linearly independent
- 0 is in the set of any span of vecs.
 - there is always a linear combo to 0! you need to show it's the *only* one.

1.6 | **Davis**

- 2.C 1
- does the strat of just going back and looking for stuff work?
 - jana, says, yeah! pretty solid.
- use the appropriate results and quote them clearly.
- how to include the actual relevant info:
 - not in parentheses?
- how to make stuff not italic!

`\DeclareMathOperator{\span}{span}`

1.7 | **Caroline**

- 2.C 3
- prove:
 - \mathbb{R}^3 is a subspace of \mathbb{R}^3 !
 - * reverse double containment
- planes that pass through origin in \mathbb{R}^3 are not $= \mathbb{R}^2$,
 - they are isomorphic!

In mathematics, an isomorphism is a structure-preserving mapping between two structures of the same type.

- this doesn't make them the same thing, but you can do the property mapping thing
- to take props from \mathbb{R}^2 to \mathbb{R}^3 , we need to know more about isomorphic
- to show a subspace:
 - additive iden
 - SCAMUL
 - addition
 - closed
 - and, also, it needs to live in the parent space.

1.8 | **Carissa**

- 2.C 4
- like Karen's but with polynomials

fin. until thursday.

%%## Rimer!%%