To Clarify something from yesterday's lectore:

• I wrote "Find B\overline for B=(0,1 3) and

L>oThis isn't possible: B= 3×3 & == 1×3 => can't be multiplied.

· What I said at the time: "This is the same as doing $B \cdot \begin{pmatrix} 2 \\ -1 \\ -1 \end{pmatrix}$ and "I could have (b/c $(1\times3)\times(3\times3) \rightarrow 1\times3$). written ZB instead!"

· What I meant to say:

- This is a typo & I should'ine written $z = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$ inskedd.
- you can't reverse the order / "transpose"
 matrices / vectors when multiplying.

$$-B \cdot {2 \choose -1} = {2+1-3 \choose 0-1-1} = {-2 \choose -q} \quad \text{is not the} \quad 5 \text{ ame as}$$

$$(2,-1,-1) B = (2+0+2,-2-1-1,6-1-4)$$

$$= (4,-4,1).$$

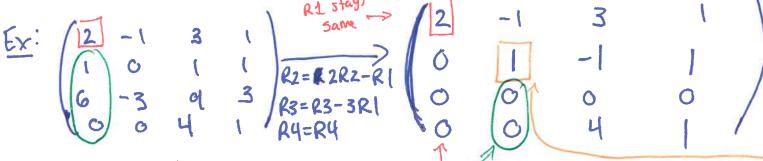
I'm sorry for any confusion this may have caused!

Ex. Do AB, BI, CD, DC

From 1^{st} day handout: $A = \begin{pmatrix} 1 & 2 \\ 2 & 1 \end{pmatrix} B = \begin{pmatrix} 0 & 1 & 1 \\ 0 & 1 & 4 \end{pmatrix} C = \begin{pmatrix} 1 & 1 & 0 \\ -1 & -3 & 3 \end{pmatrix} D = \begin{pmatrix} 2 & 4 \\ -1 & 1 \\ 0 & 0 \end{pmatrix} I = \begin{pmatrix} 0 & 0 \\ 0 & 0 \end{pmatrix}$

\$1.1 \$ 1.2 : Elementary row operations + REF/RREF

- See handout for definition of elementary row operations + REF + RREF.
- · The goal is to use elementary row operations to put matrix in REF & RREF:



· Start w/ (4,1)-entry "leading entry in row 1"

Plan to Zero out others using operation 3.

all other entries in this column are Zero.

now, we focus on leading nonzero entry in row2.

want to zero these out using operation 3, but they're already done

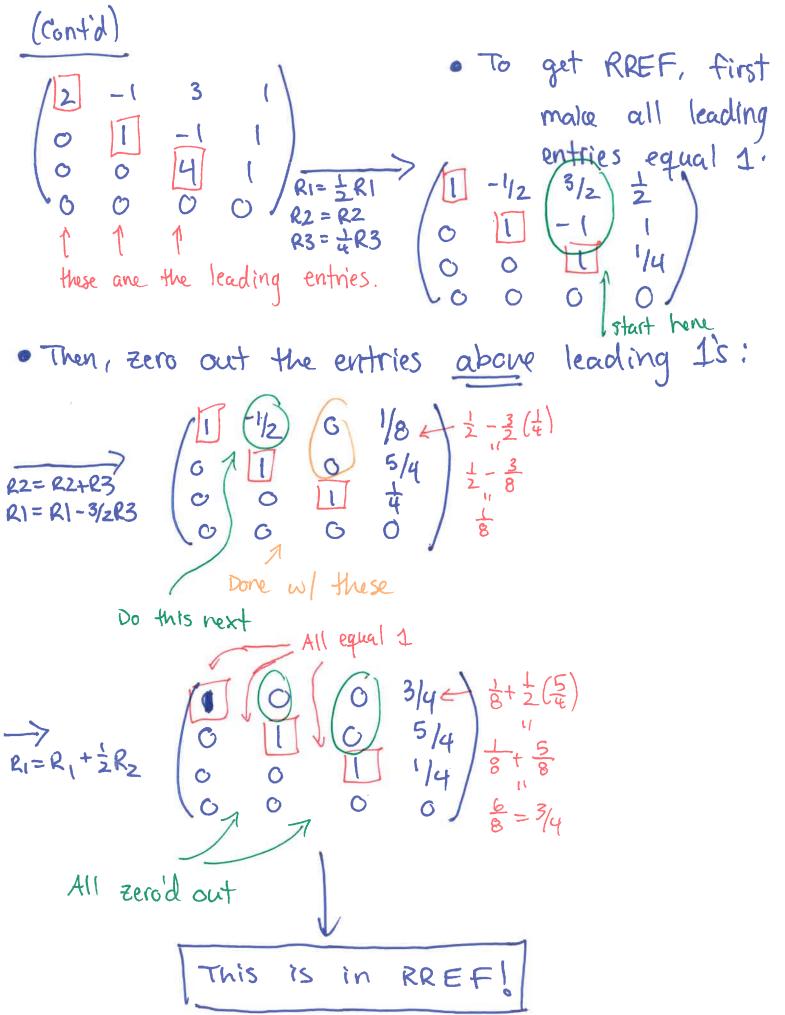
(rewrite the same matrix)

to bottom

This matrix is in REF! (but not)

this is the leading entry

we want to zero out. this, but it's done!



RREF!

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