

Homework Set MA 237

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1 LE2 v1

LE2/1

1. For each of the following matrices, explain why it is not in reduced row echelon form.

(a)

$$A = \begin{bmatrix} 0 & 0 & 1 & 0 & -2 \\ 1 & 5 & 0 & -2 & 1 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

(b)

$$B = \begin{bmatrix} 1 & -6 & 3 & 0 & -1 \\ 0 & 0 & 0 & 7 & 14 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

(c)

$$C = \begin{bmatrix} 1 & 7 & -4 & 1 & 12 \\ 0 & 1 & -1 & 0 & 2 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

2. Show step by step why

$$\text{RREF} \begin{bmatrix} 4 & 4 & 3 & 18 & -11 \\ -3 & -3 & 1 & -7 & 5 \\ 3 & 3 & 3 & 15 & -9 \end{bmatrix} = \begin{bmatrix} 1 & 1 & 0 & 3 & -2 \\ 0 & 0 & 1 & 2 & -1 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$