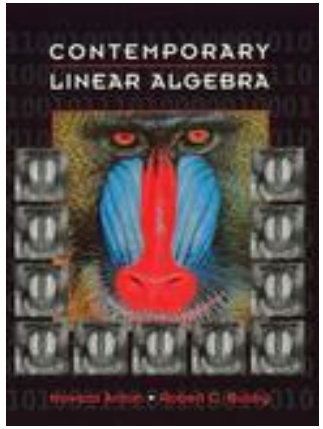
Chapter 2, Section 2 of *Contemporary Linear Algebra* by Anton and Busby



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1. Which matrix is not in reduced row echelon form?

▸ A $\begin{bmatrix} 1 & 0 & 2 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \end{bmatrix}$

▸ B $\begin{bmatrix} 1 & 0 & 2 \\ 0 & 1 & 1 \\ 0 & 0 & 0 \end{bmatrix}$

▸ C $\begin{bmatrix} 1 & 2 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \end{bmatrix}$

▸ D $\begin{bmatrix} 0 & 1 & 2 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$

▸ E $\begin{bmatrix} 1 & 2 & 0 \\ 0 & 0 & 1 \\ 0 & 0 & 0 \end{bmatrix}$

Next Question

2. Find the reduced row echelon form of

$$S = \begin{bmatrix} 0 & 2 \\ 3 & 15 \\ 1 & 4 \end{bmatrix}$$

▸ A $\begin{bmatrix} 1 & 0 \\ 0 & 1 \\ 0 & 0 \end{bmatrix}$ ▸ B $\begin{bmatrix} 0 & 0 \\ 1 & 0 \\ 0 & 0 \end{bmatrix}$ ▸ C $\begin{bmatrix} 0 & 1 \\ 1 & 0 \\ 0 & 0 \end{bmatrix}$

▸ D $\begin{bmatrix} 1 & 0 \\ 1 & 0 \\ 0 & 1 \end{bmatrix}$ ▸ E $\begin{bmatrix} 1 & 0 \\ 0 & 0 \\ 0 & 1 \end{bmatrix}$

Next Question

3. Find (x, y, z), given

$$\begin{aligned} y - z &= 20 \\ x + y - 2z &= 9 \\ 2x + y &= 4 \end{aligned}$$

- A $(20, 9, 4)$
- B $(0, 1, 0)$
- C $(-11, 20, 0)$
- D $(-9, 22, 2)$
- E $(0, -11, -31)$

Next Question

4. For what value of a does the system of equations with augmented matrix

$$\left[\begin{array}{ccc|c} 1 & -3 & -a & 2 \\ 2 & a & 1 & 0 \\ 0 & 13 & 15 & -4 \end{array}\right]$$

have infinitely many solutions?

- A -4
- B -1
- C 0
- D 4
- E 7

Next Question

5. Solve the system whose augmented matrix, in reduced row echelon form, is

$$\left[\begin{array}{ccc|c} 1 & -3 & 0 & 5 \\ 0 & 0 & 1 & 1 \\ 0 & 0 & 0 & 0 \end{array}\right]$$

- A $x = 8,\ y = 1,\ z = 0$
- B The system is inconsistent
- C $x = 5 + 3y,\ y \in \mathbf{R},\ z = 1$
- D $x = 5 + 3y,\ y \in \mathbf{R},\ z = 0$
- E $x = 5,\ y = 1,\ z = 0$

No more questions

RIGHT!

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Wrong...try again

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