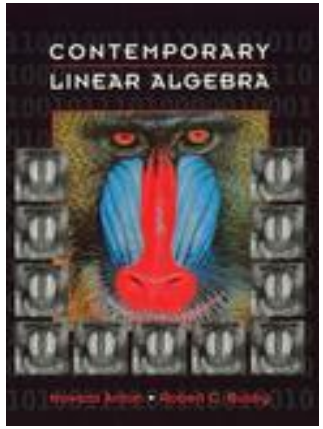
Chapter 7, Section 3 of *Contemporary Linear Algebra* by Anton and Busby



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Let

$$A = \begin{pmatrix} 1 & 2 & 3 & -1 & -8 \\ 2 & 1 & 1 & 2 & 5 \\ 0 & 0 & 2 & 2 & -6 \\ 3 & 0 & -7 & -1 & 36 \end{pmatrix}, R = \begin{pmatrix} 1 & 0 & 0 & 2 & 5 \\ 0 & 1 & 0 & -3 & -2 \\ 0 & 0 & 1 & 1 & -3 \\ 0 & 0 & 0 & 0 & 0 \end{pmatrix},$$

$$C = \begin{pmatrix} 1 & 0 & 0 & -1 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & -3 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{pmatrix}.$$

Here R is the reduced row-echelon form of A and C is the reduced row-echelon form of A^T.

1. $\{(1,0,0,2,5),(0,1,0,-3,-2),(0,0,1,1,-3)\}$ is a basis for

- A $\text{row}(A)$
- B $\text{col}(A)$
- C $\text{null}(A)$
- D $\text{null}(A^T)$
- E none of these.

Next Question

2. $\{(1,0,0,-1),(0,1,0,2),(0,0,1,-3)\}$ is a basis for

- A $\text{row}(A)$
- B $\text{col}(A)$
- C $\text{null}(A)$
- D $\text{null}(A^T)$
- E none of these.

Next Question

3. $\{(-2, 3, -1, 1, 0), (-5, 2, 3, 0, 1)\}$ is a basis for

- A $\text{row}(A)$
- B $\text{col}(A)$
- C $\text{null}(A)$
- D $\text{null}(A^T)$
- E none of these.

Next Question

4. $\{(1, -2, 3, 1)\}$ is a basis for

- A $\text{row}(A)$
- B $\text{col}(A)$
- C $\text{null}(A)$
- D $\text{null}(A^T)$
- E none of these.

Next Question

5. Let $r_1 = (-1, 3, 4, 4, 5)$, $r_2 = (1, 5, 0, -1, 2)$, and $r_3 = (3, 1, 2, 1, 1)$, and

$$S = \begin{pmatrix} 0 & 8 & 4 & 3 & 7 \\ -2 & -2 & 4 & 5 & 3 \end{pmatrix}.$$

Which matrix below has the same row space as S?

- A $\begin{bmatrix} r_1 \\ r_2 \end{bmatrix}$
- B $\begin{bmatrix} r_1 \\ r_1 \end{bmatrix}$
- C $\begin{bmatrix} r_2 \\ r_3 \end{bmatrix}$
- D $\begin{bmatrix} r_1 \\ r_3 \end{bmatrix}$
- E $\begin{bmatrix} r_3 \\ r_3 \end{bmatrix}$

No more questions

RIGHT!

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Wrong...try again

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