Quiz 3 for Linear Algebra

Name :

True/False. Answer only

1. The determinant of $\begin{pmatrix} 1 & 3 & 2 & -4 \\ 0 & 1 & 2 & -5 \\ 2 & 7 & 6 & -3 \\ -3 & -10 & -7 & 2 \end{pmatrix}$ is 10.

2. H is a subspace of R^3 and $B = \{v_1, v_2, v_3\}$ is a basis for R^3. Then, a subset of B is a basis for H.

3. Find the bases for Col A and Nul A, where $A = \begin{bmatrix} 1 & -2 & 9 & 5 & 4 \\ 1 & -1 & 6 & 5 & -3 \\ -2 & 0 & -6 & 1 & -2 \\ 4 & 1 & 9 & 1 & -9 \end{bmatrix}$

4. Find an LU factorization of $A = \begin{pmatrix} 1 & 3 & 4 & 0 \\ -3 & -6 & -7 & 2 \\ 3 & 3 & 0 & -4 \\ -5 & -3 & 2 & 9 \end{pmatrix}$.

5. Write $A = \begin{pmatrix} 1 & 3 \\ 2 & 4 \end{pmatrix}$ as a product of elementary matrices.