

Math 253 – Linear Algebra

Fall 2007

Team Problems #1, Due Friday, September 14

Determine whether the following statements are true or false, and justify your answer.

1. If the matrix A is in reduced echelon form, and the matrix B is obtained from the matrix A by deleting a row, then the matrix B is in reduced echelon form.
2. If the matrix A is in reduced echelon form, and the matrix B is obtained from the matrix A by deleting a column, then the matrix B is in reduced echelon form.
3. If A is a 4×3 matrix, then there exists a vector \vec{b} in \mathbb{R}^4 such that the system $A\vec{x} = \vec{b}$ is inconsistent.
4. If A and B are two $n \times n$ matrices of rank n , then A can be transformed into B by means of elementary row operations.