Homework 1   MATH 304   Section 3

Assigned: Monday, September 8.
Potentially Collected: Monday, September 15.

1. Find the general solution of the system

$$x_1 - 2x_2 - x_3 + 3x_4 = 0$$

$$-2x_1 + 4x_2 + 5x_3 - 5x_4 = 3$$

$$3x_1 - 6x_2 - 6x_3 + 8x_4 = 2$$

2. Suppose that a 3×5 coefficient matrix for a system has three pivot columns. Is the system consistent? Why or why not?

3. Suppose that a system of linear equations has a 3×5 augmented matrix whose fifth column is a pivot column. Is the system consistent? Why or why not?

4. Suppose the coefficient matrix of a system of linear equations has a pivot position in every row. Explain why the system is consistent.