

Take-Home Quiz 1 (Due at 7:00 p.m. on Fri. September 14, 2007)

Division: ID#: Name:

Let us consider the following system of linear equations in 6 unknowns x_1, x_2, \dots, x_6 .

$$\begin{cases} x_1 + x_3 - x_4 + 4x_5 & = -3 \\ 2x_1 + 2x_3 - x_4 + 6x_5 & = 1 \\ x_1 + x_3 + 2x_5 - x_6 & = 5 \\ -x_1 - 2x_2 - 7x_3 - 4x_5 + x_6 & = -7 \end{cases} \quad B = \begin{bmatrix} 1 & 0 & 1 & -1 & 4 & 0 & -3 \\ 2 & 0 & 2 & -1 & 6 & 0 & 1 \\ 0 & -2 & -6 & 0 & -2 & 0 & -2 \\ -1 & -2 & -7 & 0 & -4 & 1 & -7 \end{bmatrix}$$

1. Find the augmented matrix A of the system of linear equations above.
2. The matrix B is obtained by applying an elementary row operation once to the augmented matrix A . Write the elementary row operation using the notation $[i; c]$, $[i, j]$, or $[i, j; c]$.
3. Find the reduced row echelon form of the augmented matrix A . (Solution only.)
4. Find the solution of the system of linear equations. Use parameters if necessary.

Message: (1) この授業に期待すること (2) あなたにとって数学とは [HP 掲載不可のときは明記のこと]