

Name \_\_\_\_\_  
Student I.D. \_\_\_\_\_

**Math 2250-1**  
**Quiz 5**  
**September 23, 2011**

1) Consider the following system of equations

$$\begin{aligned}2 \cdot x + y + 3 \cdot z &= 4 \\ x + y - z &= 3 \\ -x - 2 \cdot y + 6 \cdot z &= -5\end{aligned}$$

1a) Exhibit the augmented matrix corresponding to this system, compute its reduced row echelon form, and find all solutions to the system.

(7 points)

1b) If we interpret solutions to this system as the intersection set of three planes, what geometric configuration of the planes does this system exhibit?

(1 point)

2) Here are two matrices  $A$  and  $B$ . Only one of the matrix products  $AB$ ,  $BA$  exists. Compute this product.

$$A := \begin{bmatrix} -1 & 4 \\ 3 & 5 \end{bmatrix} \quad B := \begin{bmatrix} -2 & 2 \\ 1 & 0 \\ 3 & 1 \end{bmatrix}$$

(2 points)