

Dr. Z.'s Math 250(1), (Fall 2010, RU) REAL Quiz #5 (Oct. 21, 2010)

NAME: (print!) _____

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1. a) Find an LU decomposition of the following matrix

$$\begin{bmatrix} 3 & -1 & 1 \\ 4 & -1 & 4 \\ -2 & 1 & 2 \end{bmatrix}$$

- b) Use the answer to part a) to solve the following system of linear equations:

$$3x_1 - x_2 + x_3 = -1$$

$$4x_1 - x_2 + 4x_3 = -2$$

$$-2x_1 + x_2 + 2x_3 = -2$$