

Math 220 Assignment

September 7, 2001

Next Quiz

The next short quiz will be given on Friday, September 14. Please note, however, that some of these quizzes will not be announced in advance.

Assignment for Monday, September 10

1. Find the reduced row echelon form of the matrix

$$\begin{pmatrix} 2 & 3 & 1 & -4 \\ 3 & -2 & -1 & 5 \\ 5 & 1 & 0 & 1 \end{pmatrix} .$$

2. Let M be the matrix

$$\begin{pmatrix} 1 & -2 & -1 \\ 5 & 4 & -3 \\ -2 & -3 & 1 \end{pmatrix} ,$$

and let f be the function from \mathbf{R}^3 to \mathbf{R}^3 given by

$$f(x) = Mx .$$

- (a) Find all points x in \mathbf{R}^3 for which

$$f(x) = \begin{pmatrix} 1 \\ -5 \\ 3 \end{pmatrix} .$$

- (b) Characterize the set of points y in \mathbf{R}^3 for which the relation

$$f(x) = \begin{pmatrix} y_1 \\ y_2 \\ y_3 \end{pmatrix}$$

holds for at least one point x in \mathbf{R}^3

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<http://math.albany.edu:8000/math/pers/hammond/course/mat220/assgt/1a010907.html>