

QUIZ 8 FOR CALC4 ON APR. 7, 2015 (TAKE-HOME)

Name: _____ RUID: _____

Email: _____

1. (5 pt) Determine if the following vectors are linearly dependent. If they are, find a relation among them

$$\vec{v}_1 = \begin{bmatrix} 1 \\ 2 \\ 1 \end{bmatrix}, \vec{v}_2 = \begin{bmatrix} 2 \\ -1 \\ 1 \end{bmatrix}, \vec{v}_3 = \begin{bmatrix} -1 \\ 1 \\ 2 \end{bmatrix}$$

2. (5 pt) Find the eigenvalues and eigenvectors for the following matrix

$$A = \begin{bmatrix} -2 & 1 \\ 1 & -2 \end{bmatrix}$$