MATH 205A,B - LINEAR ALGEBRA
WINTER 2013

QUIZ 2

NAME: **Section:**(Circle one) A(1 : 10) B(2 : 40)

Show ALL your work CAREFULLY.

Let

$$A = \begin{bmatrix} 0 & 0 & 4 \\ 0 & -3 & -1 \\ -2 & 8 & -5 \end{bmatrix} \quad \text{and} \quad \vec{b} = \begin{bmatrix} 4 \\ -7 \\ 13 \end{bmatrix}.$$

(a) Write the vector equation corresponding to the matrix equation $A\vec{x} = \vec{b}$.

(b) Does the matrix equation $A\vec{x} = \vec{b}$ have a solution? If yes, find one.

(c) Do the columns of A span $\mathbb{R}^3$? Explain.

Date: January 18, 2013.