

**MATH 205A,B - LINEAR ALGEBRA
FALL 2015**

QUIZ 2

NAME: _____ **Section:**(Circle one) A(8 : 00) B(9 : 30)

Show **ALL** your work **CAREFULLY**.

Let

$$A = \begin{bmatrix} 1 & 0 & 4 \\ 2 & 1 & -1 \\ 8 & 5 & 0 \end{bmatrix} \quad \text{and} \quad \vec{b} = \begin{bmatrix} 11 \\ -3 \\ 2 \end{bmatrix}.$$

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

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