Math 4A: Quiz 2
October 20, 2015

Names: _____   Score: _____/10

Circle which section you attend: 8am   4pm   5pm   6pm   7pm

Directions: Open book, open note, open neighbor. No phones nor calculators allowed. You will have 15 minutes to complete this quiz.

Disclaimer: The content and level of difficulty of this quiz are not guaranteed to be in correlation with the midterm nor final examinations in any form.

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1. Circle the correct answer and show your work below: The linear transformation $T : \mathbb{R}^2 \to \mathbb{R}^2$ that maps $(1, 2)$ to $(-1, 1)$ and $(0, -1)$ to $(2, -1)$ will map $(1, 1)$ to...

    (A) $(1, 2)$ (B) $(1, 0)$ (C) $(2, -1)$ (D) $(2, 1)$ (E) $(1, 1)$

2. Let
$$A = \begin{pmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{pmatrix}, \quad B = \begin{pmatrix} -1 & 0 \\ 3 & -2 \end{pmatrix}, \quad C = \begin{pmatrix} 0 & 1 \\ 7 & -1 \\ 2 & 4 \end{pmatrix}.$$

For each of the following operations, briefly explain whether or not they are defined. If they are defined, do it.

(a) $A + B$

(b) AB

(c) CB

(d) AC

(e) CA