Math 229

Quiz 18

Due: 06/27/2008

Name:_____

This is a Take-Home Quiz. You may use your book and course notes, and you may work with other members of the class, but you may not consult with outside tutors (at least not on these specific problems).

1. (2 points) Use matrices to solve the system of linear equations: $\begin{cases} 2x - y = 5 \\ 3x + 2y = 4 \end{cases}$

2. (3 points) Use matrices to solve the system of linear equations: $\begin{cases} 5x + z = 7 \\ 3x + y - 2z = 1 \\ 2x + y - z = 2 \end{cases}$

3. Given that:

$$A = \begin{bmatrix} -1 & 4 & 0 \\ 3 & -2 & 1 \\ 0 & -3 & 2 \end{bmatrix} \quad B = \begin{bmatrix} 2 & 0 & -1 \\ 0 & 1 & 2 \\ -1 & 3 & 2 \end{bmatrix} \quad C = \begin{bmatrix} 1 & 0 & 2 \\ -1 & 3 & -2 \\ 3 & 0 & 1 \end{bmatrix}$$

Find the following:

(a) (1 point) $A - B$

(b) (2 points) AB

(c) (2 points) B^2