

Name: \_\_\_\_\_

Math 260

Start Time: \_\_\_\_\_

Quiz 3 (30 min)

End Time: \_\_\_\_\_

Date: \_\_\_\_\_

1. (1, 1, 1, 1, 2 points) If  $A = \begin{bmatrix} 2 & 0 & -5 \\ -7 & 3 & 1 \end{bmatrix}$  and  $B = \begin{bmatrix} -4 & 4 & 7 \\ -9 & 1 & -2 \end{bmatrix}$ , find

a)  $A + B$

b)  $B - A$

c)  $-2B$

d)  $-A$

e)  $4A - 3B$

2. (2 points) Prove: If  $kA = 0$  (where  $k$  is a scalar and  $A$  is a matrix), then  $k = 0$  or  $A = 0$

3. (2 points) Prove: If  $A$  and  $B$  are  $m \times n$  matrices and  $k$  is a scalar, then  $k(A + B) = kA + kB$