

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

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**Math 2250, Fall 2008, Quiz 1**  
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1. Compute (a)  $3 \begin{bmatrix} 2 \\ 1 \\ 3 \end{bmatrix}$       (b)  $3 \begin{bmatrix} 2 \\ 1 \end{bmatrix} + 2 \begin{bmatrix} -1 \\ -1 \end{bmatrix}$

2. For each of the following functions, either show it is linear or show that it is not linear (for the latter, an example will suffice).

(a)  $f(x) = 1 - 2x$

(b)  $f\left(\begin{bmatrix} x \\ y \end{bmatrix}\right) = 5x + 2y$

(c)  $f(x) = 0$ , a constant function.