KFUPM/ Department of Mathematics & Statistics ID # Serial #
MATH 260-03/ Quiz 4b/ 131 Name

1. [8pts]. Determine whether $A = \begin{bmatrix} 4 & 0 & 0 \\ -1 & 4 & 0 \\ 0 & 0 & 1 \end{bmatrix}$ is diagonalizable.

2. [8pts] Use Cayley-Hamilton theorem (or diagonalization) to compute A^8 if $A = \begin{bmatrix} 3 & 1 & 0 \\ -8 & -3 & 0 \\ 0 & 1 & 0 \end{bmatrix}$