KFUPM/ Department of Mathematics & Statistics ID # Serial #
MATH 260/ Quiz 3/ 121 Name

1. [6pts] Find the eigenvalues and bases for the eigenspaces of the matrix $A = \begin{bmatrix} 0 & 0 & -2 \\ 1 & 2 & 1 \\ 1 & 0 & 3 \end{bmatrix}$.

2. [6pts] Show that the matrix in Question 1 is diagonalizable and find an invertible matrix $P$ such that $P^{-1}AP$ is a diagonal matrix.