MATH 260, Homework 11, Fall '14 Due: November 7, 2014 at 2:20 PM Honor Code:

Name: Section:

1) Give all of the eigenspaces for each matrix. Give the algebraic and geometric multiplicity associated with each eigenvalue.

a) 
$$(15 \text{ pts}) \begin{bmatrix} 5 & 1 \\ -1 & 3 \end{bmatrix}$$

b) (15 pts) 
$$\begin{bmatrix} 5 & 1 & 0 & 0 \\ 0 & 5 & 0 & 0 \\ 0 & 0 & 5 & 0 \\ 0 & 0 & 0 & 3 \end{bmatrix}$$