MATH 335 Quiz 5 Name:

Show all work. 10 points .

1) a) Find the determinant of $A = \begin{bmatrix} 1 & 5 & -6 \\ 1 & -4 & 4 \\ -2 & -7 & 9 \end{bmatrix}$

b) Is A invertible?Why?

c) Ture or False: If $B = [\mathbf{v_1}\, \mathbf{2v_1}]$ for $\mathbf{v}_1 \in \mathbb{R}^2$ then $det(B) = 2$. Why?

2) Find a basis of the eigenspace corresponding to $\lambda = 3$ for the matix A= $\begin{bmatrix} 4 & 2 & 3 \\ -1 & 1 & -3 \\ 2 & 4 & 9 \end{bmatrix}$