Name:_____

(5.2a) What is the characteristic polynomial of $A = \begin{bmatrix} 0 & 1 \\ 1 & 1 \end{bmatrix}$?

(5.2b) What are the eigenpairs of A?

(5.2c) What is the characteristic polynomial of $B = \begin{bmatrix} 7 & 3 & 14 & 21 \\ 0 & 11 & 17 & 5 \\ 0 & 0 & 6 & 4 \\ 0 & 0 & 0 & 8 \end{bmatrix}$?

(5.2d) Give a matrix with no real eigenvalues. Hint: What is the characteristic polynomial of $\begin{bmatrix} 0 & a \\ 1 & 0 \end{bmatrix}$?