Name: _____ ID #:_____

As always you need to show your work. Fill in the appropriate blanks

1. A pair (λ, v) is an eigen pair if [ ] and [ ]

2. For $A = \begin{pmatrix} 2 & 1 & 1 \\ 2 & 1 & 1 \\ -2 & 1 & 1 \end{pmatrix}$.

2.1. Is $v = \{1, 1, -1\}$ an evec of A? [ ] if it is compute the eval λ = [ ]

3. For $A = \begin{pmatrix} 2 & 1 & 1 \\ 2 & 1 & 1 \\ -2 & 1 & 1 \end{pmatrix}$.

3.1. Is $v = \{0, 1, -1\}$ an an evec of A? [ ] if it is compute the eval λ = [ ]

4. For $A = \begin{pmatrix} 4 & 2 \\ -2 & 5 \end{pmatrix}$.

4.1. Is $\lambda = 8$ an eval of A? [ ] if it is compute the evec v = [ ]

5. For $A = \begin{pmatrix} 4 & 2 \\ -2 & 5 \end{pmatrix}$.

5.1. Is $\lambda = 5$ an eval of A? [ ] if it is compute the evec v = [ ]