MTH 266, Quiz #12, Fall 2018

Name _____

Instructions: Show all work. Use exact answers unless otherwise asked to round.

1. Find the eigenvalues and eigenvectors of the matrix $A = \begin{bmatrix} -4 & -1 \\ 6 & 1 \end{bmatrix}$. Is the matrix diagonalizable? Why or why not?

2. Find the eigenvalues and eigenvectors of the matrix $A = \begin{bmatrix} 5 & 3 \\ -4 & 4 \end{bmatrix}$. If the eigenpairs are real, what size space do they span?