

Math 325: Differential Equations Name: _____

Quiz 4 *February 16, 2001*

You may use your own calculator. You may not use anything else. You may not pass a calculator to another person.

Show all your work. Erase or cross out any work you do not want graded.

a) Find all eigenvalues and eigenvectors of the matrix

$$A = \begin{bmatrix} 1 & \sqrt{8} \\ \sqrt{8} & -1 \end{bmatrix}.$$

b) Is A diagonalizable? If so, find a matrix T with $T^{-1}AT$ diagonal. If not, give a reason.