

QUIZ 9 FOR CALC 4

Name: _____ RUID: _____

- (1) (4 pt) Find the eigenvalues and eigenvectors of the following matrix

$$\begin{bmatrix} 3 & 0 \\ 8 & -1 \end{bmatrix}$$

- (2) (2 pt) Convert the following differential equation to a system of first-order differential equations

$$(1-t)x''(t) + tx'(t) - x(t) = 2(1-t)$$

- (3) (1 pt) Write the matrix form of the system you obtained in the previous problem.
- (4) (1 pt) No review problem this week. You get this 1 point for free! Be ready for the review problem on stability next week.