

MATH 10B, SPRING 2017, QUIZ 12

- (1) Find the eigenvalues of the following matrix and for each eigenvalue, find a corresponding eigenvector.

$$\begin{bmatrix} 1 & 2 \\ 3 & -4 \end{bmatrix}$$

- (2) Solve the following initial value problem.

$$y' = \begin{bmatrix} 1 & 2 \\ 3 & -4 \end{bmatrix} y \quad y(0) = \begin{bmatrix} 0 \\ -16 \end{bmatrix}$$