

# EIGENVECTORS AND EIGENVALUES FOR $2 \times 2$ MATRICES



EXERCISE 1: Find the eigenvalues of the following  $2 \times 2$  matrices

a)  $A = \begin{bmatrix} 0 & 1 \\ -2 & -3 \end{bmatrix}$

b)  $B = \begin{bmatrix} 2 & 2 \\ 5 & -1 \end{bmatrix}$

EXERCISE 2: Find the eigenvectors of the following  $2 \times 2$  matrices

a)  $A = \begin{bmatrix} 0 & 1 \\ -2 & -3 \end{bmatrix}$

b)  $B = \begin{bmatrix} 2 & 2 \\ 5 & -1 \end{bmatrix}$

EXERCISE 3: Find the eigenvalues and eigenvectors of the following

$$C = \begin{bmatrix} 2 & 2 \\ 1 & 3 \end{bmatrix}$$