Lecture 28: Eigenvalues

1 $A = \begin{bmatrix} 4 & -1 \\ 3 & 0 \end{bmatrix}$

2 Find all the eigenvalues and eigenvectors of the matrix

$$A = \begin{bmatrix} 1 & 2 & 2 & 2 \\ 2 & 1 & 2 & 2 \\ 2 & 2 & 1 & 2 \\ 2 & 2 & 2 & 1 \end{bmatrix}.$$

3 1) Let

$$A = \begin{bmatrix} 0.2 & 0.8 \\ 0.3 & 0.7 \end{bmatrix}.$$

Find the eigenvalues and eigenvectors of A.

4 Let

$$B = A^T = \begin{bmatrix} 0.2 & 0.3 \\ 0.8 & 0.7 \end{bmatrix}.$$

Find the eigenvalues and eigenvectors of B.

The matrix B is called a **regular transition matrix**.