

## Exercises

1. Using Power Method, find the dominant eigenvalue and the corresponding eigenvector of the following matrices:

(i)  $\begin{pmatrix} 1 & -5 \\ -3 & -1 \end{pmatrix}$

(ii)  $\begin{pmatrix} -4 & 10 \\ 7 & 5 \end{pmatrix}$

(iii)  $\begin{pmatrix} 1 & 2 & -2 \\ -2 & 5 & -2 \\ -6 & 6 & -3 \end{pmatrix}$

(iv)  $\begin{pmatrix} 3 & 2 & -3 \\ -3 & -4 & 9 \\ -1 & -2 & 5 \end{pmatrix}$