

14 June, 2024

5:35:35 PM

>> L3

Choose a matrix from P,Q,R,S: P

M =

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

e1 =

5

e2 =

-1

X =

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

D =

$$\begin{bmatrix} 5.0000 & -0.0000 \\ 0.0000 & -1.0000 \end{bmatrix}$$

>> L3

Choose a matrix from P,Q,R,S: Q

M =

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

e1 =

5

e2 =

2

X =

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

D =

$$\begin{bmatrix} 5.0000 & 0 \\ 0.0000 & 2.0000 \end{bmatrix}$$

>> L3

Choose a matrix from P,Q,R,S: R

M =

$$\begin{bmatrix} 1 & -2 \\ -4 & 8 \end{bmatrix}$$

e1 =

9

e2 =

0

X =

$$\begin{bmatrix} 2 & 2 \\ -8 & 1 \end{bmatrix}$$

D =

$$\begin{bmatrix} 9 & 0 \\ 0 & 0 \end{bmatrix}$$

>> L3

Choose a matrix from P,Q,R,S: S

M =

$$\begin{bmatrix} 2 & 3 \\ -3 & 8 \end{bmatrix}$$

e1 =

5.0000

e2 =

5.0000

The matrix is not diagonalizable

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