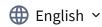
Diagonalisation and applications



Practice Assignment • 20 min



Your grade: 100%

Your latest: 100% • Your highest: 100%

To pass you need at least 80%. We keep your highest score.

Next item →

1. In this quiz you will diagonalise some matrices and apply this to simplify calculations.

1/1 point

Given the matrix $T=egin{bmatrix}6&-1\2&3\end{bmatrix}$ and change of basis matrix $C=egin{bmatrix}1&1\1&2\end{bmatrix}$

(whose columns are eigenvectors of T), calculate the diagonal matrix $D=C^{-1}TC$.

- $\begin{bmatrix}
 6 & 0 \\
 0 & 3
 \end{bmatrix}$
- $\begin{bmatrix}
 9 & 0 \\
 0 & 20
 \end{bmatrix}$
- $\begin{bmatrix}
 3 & 0 \\
 0 & 3
 \end{bmatrix}$
 - **⊘** Correct

Well done!

2. Given the matrix $T=egin{bmatrix}2&7\0&-1\end{bmatrix}$ and change of basis matrix $C=egin{bmatrix}7&1\-3&0\end{bmatrix}$

1/1 point

(whose columns are eigenvectors of T), calculate the diagonal matrix