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1.15 Eigenvalues and eigenvectors

Checklist

What you should know

By the end of this subtopic you should be able to:

- find eigenvalues and eigenvectors for a 2×2 matrix by hand and using a calculator

- determine whether a given vector is the eigenvector of a 2×2 matrix

- write the characteristic polynomial of a 2×2 matrix

- use eigenvalues and eigenvectors to diagonalise a matrix

- find powers of 2×2 matrices using a diagonalisation

- solve population movement questions using matrix powers and diagonalisation.

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