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1.14 Matrices

Checklist

What you should know

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

- write data in matrix form

- interpret matrix notation

- add and subtract matrices

- multiply a matrix by a scalar

- calculate the product of matrices and state the conditions where this is possible

- find the determinant and the inverse of a 2×2 matrix algebraically and with a calculator and understand the conditions where this is possible

- find the determinant and the inverse of an $n \times n$ matrix with a calculator and understand the conditions where this is possible

- know the properties of matrix algebra and use them to simplify or solve matrix equations

- write systems of linear equations in terms of matrix equations and solve using matrix algebra

- understand how matrix multiplication can be use in cryptography

- use matrix multiplication to encrypt and decrypt messages.

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