O Level E Maths   Tutorial 9: Matrices

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1. Given matrices

$$A = \begin{pmatrix} 2 & 1 \\ 3 & 0 \end{pmatrix}$$

$$B = \begin{pmatrix} 1 & 4 \\ 2 & 5 \end{pmatrix}$$

Find the product AB.

• product of a scalar quantity and a matrix

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2. Using the matrices in question 1 above, find

(i)   2A

(ii)   3B

• problems involving the calculation of the sum and product (where appropriate) of two matrices

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3. Cheng needs 5 apples and 10 oranges. Xin wants 6 apples and 8 oranges. This information can be represented by the matrix

$$P = \begin{pmatrix} 5 & 10 \\ 6 & 8 \end{pmatrix}$$

In a store, an apple cost \$2 and an orange cost \$3. Online, it cost, an apple cost \$2.20 and an orange cost \$2.60. This can be displayed as

$$Q = \begin{pmatrix} 2.00 & 2.20 \\ 3.10 & 2.60 \end{pmatrix}$$

(i) Find PQ.

(ii) Explain the meaning of each element in PQ..