

# Maths Test 2

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Q1)

$$(i) \quad AB = \begin{pmatrix} -10 + -10 + 0 & 16 + 30 - 6 & 2 - 10 + 9 \\ -25 + 0 + 0 & -40 + 0 + 10 & 0 + 0 + 15 \\ -15 + 0 + 0 & 24 + 0 - 4 & 0 + 0 + 6 \end{pmatrix}$$

$$AB = \begin{pmatrix} -20 & -20 & 1 \\ -25 & -50 & 15 \\ -15 & 20 & 6 \end{pmatrix}$$

ii) BA

$$BA = \begin{pmatrix} -10 - 40 + 0 & 25 + 0 + 0 & -15 + 40 + 0 \\ 4 - 30 + 6 & -10 + 0 + 0 & 6 + 30 + 4 \\ 0 + 10 + 9 & 0 + 0 + 0 & 0 - 10 + 6 \end{pmatrix}$$

$$BA = \begin{pmatrix} -50 & 25 & 25 \\ -20 & -10 & 40 \\ 19 & 0 & -4 \end{pmatrix}$$

iii)

$$AC = \begin{pmatrix} 24 + 15 + 6 & 10 - 10 + 15 \\ -60 + 0 + 10 & -25 + 0 + 25 \\ 36 + 0 + 4 & 15 + 0 + 10 \end{pmatrix}$$

$$AC = \begin{pmatrix} 45 & 15 \\ -50 & 0 \\ 40 & 25 \end{pmatrix}$$