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Pg 1

ACHA4000

i)
a)

$$A = \begin{pmatrix} 0 & -1 & 7 \\ -5 & 2 & 5 \\ 3 & 0 & 2 \end{pmatrix} \quad B = \begin{pmatrix} -2 & 8 & 0.5 \\ 2 & 5 & 2 \\ 0 & -4 & 1 \end{pmatrix}$$

$$C = \begin{pmatrix} 2 & 5 \\ -6 & 0 \\ 1 & 12 \end{pmatrix} \quad D = \begin{pmatrix} 8 & 14 \\ 0.25 & 21 \end{pmatrix}$$

b)

$$AB = \begin{pmatrix} 8 & -2 & 2 \\ -2 & 2 & 2 \\ 3 & 2 & 2 \end{pmatrix}$$

$$(i) \quad AB = \begin{pmatrix} -16 - 2 + 0 & 64 - 5 - 63 & -6 + 0 + 0 \\ 10 + 4 + 0 & -40 + 10 - 45 & 24 + 0 - 18 \\ -6 + 0 + 0 & 24 + 0 - 18 & 3.5 + 0 + 2 \end{pmatrix}$$

~~$$\begin{pmatrix} -6 + 0 + 0 & 64 - 5 - 63 & -6 + 0 + 0 \\ 24 + 0 - 18 & -40 + 10 - 45 & 24 + 0 - 18 \\ 3.5 + 0 + 2 & 24 + 0 - 18 & 3.5 + 0 + 2 \end{pmatrix}$$~~

↓

$$\begin{pmatrix} 4 - 2 + 7 \\ -25 + 4 + 5 \\ 15 + 0 + 2 \end{pmatrix}$$

$$\Rightarrow AB = \begin{pmatrix} -18 & -4 & 9 \\ 14 & -75 & -16 \\ -6 & 6 & 3.5 \end{pmatrix}$$