

Pg 7

$$\text{iii) } AC = \begin{pmatrix} 16+6+7 & 40+0+84 \\ -10+-18+5 & -25+0+60 \\ 6+0+2 & 15+0+24 \end{pmatrix}$$

$$AC = \begin{pmatrix} 29 & 124 \\ -17 & 45 \\ 8 & 39 \end{pmatrix}$$

$$\text{iv) } CA = \begin{pmatrix} 2 & 5 \\ -6 & 0 \\ 1 & 12 \end{pmatrix} \quad A = \begin{pmatrix} 8 & -1 & 7 \\ 5 & 2 & 5 \\ 3 & 0 & 2 \end{pmatrix}$$

$3 \times 2 \qquad 3 \times 3$

Cannot multiply

$$\text{v) } |A| = \begin{vmatrix} 8 & -1 & 7 \\ 5 & 2 & 5 \\ 3 & 0 & 2 \end{vmatrix}$$

$$\begin{aligned} |A| &= 8(4-0) - (-1)(15-10) + 7(6-0) \\ &= 8(4) + 1(5) + 7(6) \\ &= 24 + 5 + 42 = \underline{71} \end{aligned}$$

$$\text{vi) } B = \begin{pmatrix} -2 & 8 & 0.5 \\ 2 & 5 & 2 \\ 0 & -9 & 1 \end{pmatrix}$$

$$\begin{aligned} |B| &= -2(-18-5) - 8(0-2) + 0.5(-18-0) \\ &= -2(-23) - 8(-2) + 0.5(-18) \\ &= -46 + 16 - 9 \\ &= \underline{-49} \end{aligned}$$