

$$\begin{aligned} \text{av)} \quad |A| &= 8[(2 \times 2) - (0 \times 5)] - (-1)[(-5 \times 2) - (5 \times 3)] + 7[(-5 \times 0) - (2 \times 3)] = \\ &= [8 \times (4 - 0)] - [(-1) \times (-10 - 15)] + [7 \times (0 - 6)] = \\ &= 32 - (-25) - 42 = 15 \end{aligned}$$

aii) can not be multiplied because C has 2 columns.
C is a 3×2 matrix and A is 3×2 so 2 and 3 are not equal.

$$\begin{aligned} \text{avi)} \quad |B| &= -2[(5 \times 1) - (-9 \times 2)] - 8[(2 \times 1) - (2 \times 0)] + 0.5[(2 \times -9) - (5 \times 0)] = \\ &= -2 \times (5 - -18) - (8 \times 4) + (0.5 \times -18) \\ &= (-2 \times 23) - (8 \times 4) + (0.5 \times -18) \\ &= -87 \end{aligned}$$

$$\text{avii)} \quad A+B = \begin{pmatrix} 6 & 7 & 7.5 \\ -3 & 7 & 7 \\ 3 & -9 & 3 \end{pmatrix}$$