Session 1 solutions

Sol.1- $$Q = \begin{matrix} \\ A \\ B \end{matrix}\begin{matrix} \begin{matrix} A & B & C & D \end{matrix} \\ \begin{bmatrix} 1 & 3 & 1 & -1 \\ 0 & 2 & 3 & 2 \end{bmatrix}_{2\times 4} \end{matrix}$$

or $$Q = \begin{matrix} A \\ B \\ C \\ D \end{matrix}\begin{bmatrix} 1 & 0 \\ 3 & 2 \\ 1 & 3 \\ -1 & 2 \end{bmatrix}_{4\times 2}$$

Sol. 2- 1×8 , $8\times 1, 2\times 4$, 4×2

Sol. 3- $$A = \begin{bmatrix} 2 & 3 \\ 3 & 4 \\ 4 & 5 \end{bmatrix}$$

$a_{23} = 2+3$

Sol. 4- $x=1,\ y=4,\ z=3$

Sol. 5- $$2A-B = \begin{bmatrix} -1 & 5 & 3 \\ 5 & 6 & 0 \end{bmatrix}$$

Sol. 6- $$AB = \begin{bmatrix} 75 & 117 & 72 \\ 25 & 39 & 24 \end{bmatrix}$$

Sol. 7- $$(AB)^T = \begin{bmatrix} 75 & 25 \\ 117 & 39 \\ 72 & 24 \end{bmatrix}$$