

(5)

Q1:- If $A = \begin{bmatrix} 2 & 3 \\ 1 & 5 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 7 \\ 6 & 4 \end{bmatrix}$, then
show that (i) $4A - 3B = A$

Q2:- Find x and y if

$$(i) \begin{bmatrix} x+3 & 1 \\ -3 & 3y-4 \end{bmatrix} = \begin{bmatrix} 2 & 1 \\ -3 & 2 \end{bmatrix}$$

$$(ii) \begin{bmatrix} 2 & 0 & x \\ 1 & y & 3 \end{bmatrix} + 2 \begin{bmatrix} 1 & x & y \\ 0 & 2 & -1 \end{bmatrix} = \begin{bmatrix} 4 & - & 3 \\ 1 & & 1 \end{bmatrix}$$

Q3:- If $A = \begin{bmatrix} 1 & -1 & 2 \\ 0 & 3 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 2 & 3 & 0 \\ 1 & 2 & -1 \end{bmatrix}$

then show that $(A+B)^t = A^t + B^t$

Q4:- Solve the following system by matrix inversion method.

$$\begin{cases} 4x - 2y = 8 & x + 2y = -3 \\ 3x + y = -4 & 3x - y = 5 \end{cases}$$
$$\begin{cases} 3x - 4y = 4 \\ x + 2y = 8 \end{cases}$$

Cramer's Rule

$$(i) \begin{cases} 2x + y = 1 \\ -5x + 2y = 7 \end{cases}$$

$$\begin{cases} 3x - 2y = 4 \\ -6x + 4y = 7 \end{cases}$$

$$\begin{cases} x - 2y = 4 \\ -3x - 2y = -10 \end{cases}$$

$$\begin{cases} 4x + y = 9 \\ -3x - y = -5 \end{cases}$$