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Q1) AB 3×3 3×3

$$\begin{array}{ccc} 2 & -5 & 3 \\ -5 & 0 & 5 \\ 3 & 0 & 2 \end{array} \quad \begin{array}{ccc} -5 & 8 & 0 \\ 2 & 6 & 2 \\ 0 & -2 & 3 \end{array}$$

$$\begin{pmatrix} -20 & -20 & -1 \\ 25 & -50 & 5 \\ -15 & 20 & 4 \end{pmatrix}$$

↑ ANSWER

$2 \times -5 + -5 \times 2 + 3 \times 0 = -20$

$2 \times 8 + -5 \times 6 + 3 \times -2 = -20$

$2 \times 0 + -5 \times 2 + 3 \times 3 = -1$

$-5 \times -5 + 0 \times 2 + 5 \times 0 = 25$

$-5 \times 8 + 0 \times 6 + 5 \times -2 = -50$

$-5 \times 0 + -5 \times 2 + 5 \times 3 = 5$

$3 \times -5 + 0 \times 2 + 2 \times 0 = -15$

$3 \times 8 + 0 \times 6 + 2 \times -2 = 20$

$3 \times 0 + -5 \times 2 + 2 \times 3 = -4$

Q1 ii) BA 3×3 3×3

$$\begin{array}{ccc} -5 & 8 & 0 \\ 2 & 6 & 2 \\ 0 & -2 & 3 \end{array} \quad \begin{array}{ccc} 2 & -5 & 3 \\ -5 & 0 & 5 \\ 3 & 0 & 2 \end{array}$$

$$\begin{pmatrix} 15 & 25 & 25 \\ 10 & -10 & 40 \\ 9 & 0 & -4 \end{pmatrix}$$

ANSWER ←

$-5 \times 2 + -5 \times -5 + 0 \times 3 = 15$

$-5 \times -5 + 8 \times 0 + 0 \times 0 = 25$

$-5 \times 3 + 8 \times 5 + 0 \times 2 = 25$

$2 \times 2 + 0 \times -5 + 2 \times 3 = 10$

$2 \times -5 + 6 \times 0 + 2 \times 0 = -10$

$2 \times 3 + 6 \times 5 + 2 \times 2 = 40$

$0 \times 2 + 0 \times -5 + 3 \times 3 = 9$

$0 \times -5 + -2 \times 0 + 3 \times 0 = 0$

$0 \times 3 + -2 \times 5 + 3 \times 2 = -4$

Q1 iii) 3×3 3×2

$$\begin{array}{ccc} 2 & -5 & 3 \\ -5 & 0 & 5 \\ 3 & 0 & 2 \end{array} \quad \begin{array}{cc} 12 & 5 \\ -3 & 2 \\ 2 & 5 \end{array}$$

$$\begin{pmatrix} 45 & 15 \\ 50 & 0 \\ 40 & 25 \end{pmatrix}$$

← ANSWER

$$\begin{array}{l} 2 \times 12 + -5 \times -3 + 3 \times 2 \\ -5 \times 12 + 0 \times -3 + 5 \times 2 \\ 3 \times 12 + 0 \times -3 + 2 \times 2 \end{array}$$

$$\begin{array}{l} 2 \times 5 + -5 \times 2 + 3 \times 5 \\ -5 \times 5 + 0 \times 2 + 5 \times 5 \\ 3 \times 5 + 0 \times 2 + 2 \times 5 \end{array}$$

Q1 iv) CA 3×2 3×3

NOT Same ← ANSWER