Resolver los siguientes ejercicios

1-10   hacer el   5 y 6
11-20   hacer el   13 y 14
23-26   hacer el   23

- Encuentre A+B, A-B, 4A y 3A-2B

⑤

$$A = \begin{bmatrix} 1 \\ 0 \end{bmatrix}_{2 \times 1} \qquad B = \begin{bmatrix} 6 \\ 2 \end{bmatrix}_{2 \times 1}$$

$A + B = C$

$$C = \begin{bmatrix} 7 \\ 2 \end{bmatrix}_{2 \times 1}$$

$A - B = D$

$$D = \begin{bmatrix} -5 \\ -2 \end{bmatrix}_{2 \times 1}$$

$4A = E$

$$E = \begin{bmatrix} 4 \\ 0 \end{bmatrix}_{2 \times 1}$$

$3A - 2B = F$

$$F = \begin{bmatrix} -9 \\ -4 \end{bmatrix}_{2 \times 1}$$

$3A = G$

$$G = \begin{bmatrix} 3 \\ 0 \end{bmatrix}_{2 \times 1}$$

$-2B = H$

$$H = \begin{bmatrix} -12 \\ -4 \end{bmatrix}_{2 \times 1}$$

(6)

$$A = \begin{bmatrix} 1 & -6 & 3 & 7 \\ 2 & 0 & 14 & 1 \end{bmatrix}_{2 \times 4} \qquad B = \begin{bmatrix} 4 & 6 & 9 & 1 \\ 5 & 0 & 7 & 2 \end{bmatrix}_{2 \times 4}$$

$A + B = C$ $\qquad\qquad\qquad A - B = D$

$$C = \begin{bmatrix} 5 & 0 & 12 & 8 \\ 7 & 0 & 11 & 3 \end{bmatrix}_{2 \times 4} \qquad D = \begin{bmatrix} -3 & -12 & -6 & 6 \\ -3 & 0 & -3 & -1 \end{bmatrix}_{2 \times 4}$$

$4A = E$

$$E = \begin{bmatrix} 4 & -24 & 12 & 28 \\ 8 & 0 & 16 & 4 \end{bmatrix}_{2 \times 4}$$

$3A - 2B = F$

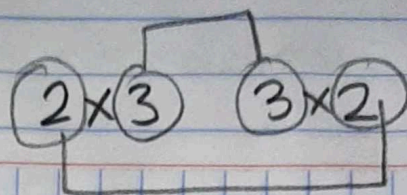$$F = \begin{bmatrix} -5 & -30 & -9 & 19 \\ -4 & 0 & -2 & -1 \end{bmatrix}_{2 \times 4}$$

$3A = G$ $\qquad\qquad\qquad -2B = H$

$$G = \begin{bmatrix} 3 & -18 & 9 & 21 \\ 6 & 0 & 12 & 3 \end{bmatrix}_{2 \times 4} \qquad H = \begin{bmatrix} -8 & -12 & -18 & -2 \\ -10 & 0 & -14 & -4 \end{bmatrix}_{2 \times 4}$$

Encuentre AB, BA

2×③ ③×2

⑬

$$A = \begin{bmatrix} 4 & 0 & 1 \\ 2 & -3 & 5 \end{bmatrix}_{2\times3} \qquad B = \begin{bmatrix} 3 & 2 \\ 1 & 4 \\ 0 & 6 \end{bmatrix}_{3\times2}$$

AB = C

$$C = \begin{bmatrix} 12 & 14 \\ 3 & 22 \end{bmatrix}_{2\times2}$$

$C_{11} = (4 \cdot 3) + (0 \cdot 1) + (1 \cdot 0) = 12$
$C_{12} = (4 \cdot 2) + (0 \cdot 4) + (1 \cdot 6) = 14$
$C_{21} = (2 \cdot 3) + (-3 \cdot 1) + (5 \cdot 0) = 3$
$C_{22} = (2 \cdot 2) + (-3 \cdot 4) + (5 \cdot 6) = 22$

BA = D

$$D = \begin{bmatrix} 16 & -6 & 13 \\ 12 & -12 & 21 \\ 12 & -18 & 30 \end{bmatrix}_{3\times3}$$

$d_{11} = (3 \cdot 4) + (2 \cdot 2) = 16$
$d_{12} = (3 \cdot 0) + (2 \cdot -3) = -6$
$d_{13} = (3 \cdot 1) + (2 \cdot 5) = 13$
$d_{21} = (1 \cdot 4) + (4 \cdot 2) = 12$
$d_{22} = (1 \cdot 0) + (4 \cdot -3) = -12$
$d_{23} = (1 \cdot 1) + (4 \cdot 5) = 21$
$d_{31} = (0 \cdot 4) + (6 \cdot 2) = 12$
$d_{32} = (0 \cdot 0) + (6 \cdot -3) = -18$
$d_{33} = (0 \cdot 1) + (6 \cdot 5) = 30$

este caso

$$X$$

$$3 \times \boxed{2} \quad \boxed{3} \times 2$$

⑭

$$A = \begin{bmatrix} 5 & 1 \\ 6 & 2 \\ -3 & 1 \end{bmatrix}_{3 \times 2} \qquad B = \begin{bmatrix} 4 & 0 \\ 1 & 3 \\ 2 & -2 \end{bmatrix}_{3 \times 2}$$

No se cumple la condicion
Asi que no es multiplicacion
matricial.

㉓ $A(BC)$

$$A = \begin{bmatrix} 1 & -2 \\ -2 & 4 \end{bmatrix} \qquad B = \begin{bmatrix} 6 & 3 \\ 2 & 1 \end{bmatrix} \qquad C = \begin{bmatrix} 0 & 2 \\ 3 & 4 \end{bmatrix}$$

$$BC = 0 \qquad\qquad A(BC) = AD = E$$

$$D = \begin{bmatrix} 0 & 6 \\ 6 & 4 \end{bmatrix} \qquad\qquad E = \begin{bmatrix} 0 & -12 \\ -12 & 16 \end{bmatrix}$$