$$\begin{bmatrix} 4 & 1 & 3 \\ 2 & -5 & 7 \end{bmatrix} \begin{bmatrix} -2 & 3 \\ -4 & -2 \\ 5 & 1 \end{bmatrix} = \begin{bmatrix} 3 & 13 \\ 51 & 23 \end{bmatrix}$$

ROWS M1 — cols M1 — ~~Rows~~ M2 — cols M2

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

MUST BE SAME

ROWS M1 x cols M2

2×2

IS the Resultant Matrix

So ∴ =>

$$\begin{bmatrix} 4 & 1 & 3 \\ 2 & -5 & 7 \end{bmatrix} \begin{bmatrix} -2 & 3 & 1 & 2 \\ -4 & -2 & 5 & 6 \\ 5 & 1 & 7 & 8 \end{bmatrix} = \begin{bmatrix} \quad \end{bmatrix}$$

ROWS M1 — cols M1 — ROWS M2 — cols M2

$2 \times \boxed{3 \times 3} \times 4$

MUST BE SAME

ROWS M1 x cols M2

2×4

Resultant MATRIX