

## DETERMINANTES DE 3X3 (METODO DE LAPLACE)

$$|x| = \begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{vmatrix} = a_{11} \begin{vmatrix} a_{22} & a_{23} \\ a_{32} & a_{33} \end{vmatrix} - a_{12} \begin{vmatrix} a_{21} & a_{23} \\ a_{31} & a_{33} \end{vmatrix} + a_{13} \begin{vmatrix} a_{21} & a_{22} \\ a_{31} & a_{32} \end{vmatrix}$$

Hallar el determinante de la matriz  $A = \begin{pmatrix} -2 & 1 & 4 \\ 3 & 5 & -7 \\ 1 & 6 & 2 \end{pmatrix}$

Solución:  $a_{11} = \square$   $a_{12} = \square$   $a_{13} = \square$

$$\begin{vmatrix} -2 & 1 & 4 \\ 3 & 5 & -7 \\ 1 & 6 & 2 \end{vmatrix} = \square \begin{vmatrix} 5 & -7 \\ 6 & 2 \end{vmatrix} - \square \begin{vmatrix} 3 & -7 \\ 1 & 2 \end{vmatrix} + \square \begin{vmatrix} 3 & 5 \\ 1 & 6 \end{vmatrix}$$

$$= -2 \cdot (5 \cdot 6 - (-7) \cdot 6) - 1 \cdot (3 \cdot 2 - 1 \cdot (-7)) + 4 \cdot (3 \cdot 6 - 1 \cdot 5)$$

$$= -2 \cdot (10 + 42) - 1 \cdot (6 + 7) + 4 \cdot (18 - 5)$$

$$= \square$$