TEMA 3 - DETERMINANTES

Nº ⇒ Asociado a una matriz cuadrada

$(A)_{2x2}$ ⇒ Matriz de dim 2

$|A|$ ⇒ Determinante de orden 2

DET DE ORD 2

$\begin{vmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{vmatrix} = a_{11}a_{22} - a_{12}a_{21}$

$\begin{vmatrix} 2 & 3 \\ 4 & 5 \end{vmatrix} = 2.5 - 3.4 = 10 - 12 = -2$

DET DE ORDEN 3 (Regla de Sarrus)

$\begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{vmatrix} =$ [\ + ◁ + ◁] − [/ + ▷ + ▷]

$[a_{11}a_{22}a_{33} + a_{21}a_{32}a_{13} + a_{12}a_{23}a_{31}]$

$-[a_{31}a_{22}a_{13} + a_{23}a_{32}a_{11} + a_{21}a_{12}a_{33}]$

$\begin{vmatrix} 1 & 0 & 2 \\ -1 & 1 & 3 \\ 2 & -1 & 2 \end{vmatrix} = [1.1.2 + 0.3.2 + (-1)(-1).2] - [2.1.2 + 3.(-1).1 + 0.(-1).2]$

$= [2+2] - [4-3] = 4 - 1 = 3$

nov 5-14:29

a) $\begin{vmatrix} 13 & 6 \\ 4 & 2 \end{vmatrix} = 26 - 24 = 2$

a) $\begin{vmatrix} 5 & 1 & 4 \\ 0 & 3 & 6 \\ 7 & 6 & 8 \end{vmatrix} = [120 + 54] - [108 + 180] = -114$

b) $\begin{vmatrix} 13 & 6 \\ 4 & -2 \end{vmatrix} = -26 - 24 = -50$

b) $\begin{vmatrix} 9 & 0 & 3 \\ -1 & 1 & 0 \\ 0 & 2 & 1 \end{vmatrix} = [9 - 6] - [0] = 3$

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