

Problemas determinantes nxn

10 problemas con enunciado y solución

Calcula los siguientes determinantes:

Problema 1:

$$\begin{vmatrix} 2 & 0 & 3 & 4 \\ 1 & 2 & 1 & -3 \\ 0 & 0 & 4 & 4 \\ 0 & 0 & 0 & 3 \end{vmatrix}$$

Problema 2:

$$\begin{vmatrix} -3 & 4 & 1 & 4 \\ 0 & 3 & 1 & 0 \\ 2 & 3 & 0 & 2 \\ 3 & 0 & 4 & -2 \end{vmatrix}$$

Problema 3:

$$\begin{vmatrix} 0 & 3 & 1 & 5 \\ 1 & 2 & 3 & -2 \\ 1 & 0 & 0 & -3 \\ 3 & 4 & -1 & 0 \end{vmatrix}$$

Problema 4:

$$\begin{vmatrix} 2t & 3 & 0 & 4 \\ (1-t) & -2 & 0 & 0 \\ 0 & 0 & t & 0 \\ 0 & 0 & 2 & -3 \end{vmatrix}$$

Problema 5:

$$\begin{vmatrix} -1 & 0 & 0 & 3 \\ 5 & 4x & 3 & 0 \\ 0 & 0 & 1 & (x-1) \\ 0 & 2x & 0 & 1 \end{vmatrix}$$

Problema 6:

$$\begin{vmatrix} 0 & \alpha & 0 & \beta \\ 3 & 0 & 0 & 0 \\ 4 & (1-\alpha) & 2\beta & 0 \\ -5 & 0 & 3 & -1 \end{vmatrix}$$

Problema 7:

$$\begin{vmatrix} 1 & 3 & 0 & -1 & 0 \\ 2 & 1 & 2 & 1 & 4 \\ 0 & 3 & 0 & 2 & -3 \\ 0 & 0 & 0 & 3 & 1 \\ 0 & 0 & 0 & 0 & 2 \end{vmatrix}$$

Problema 8:

$$\begin{vmatrix} 0 & 1 & 2 & 1 & 0 \\ 0 & 1 & 0 & 0 & 1 \\ 0 & 0 & 0 & 2 & 0 \\ 1 & 0 & 0 & 1 & -2 \\ 1 & 0 & -1 & 0 & 0 \end{vmatrix}$$

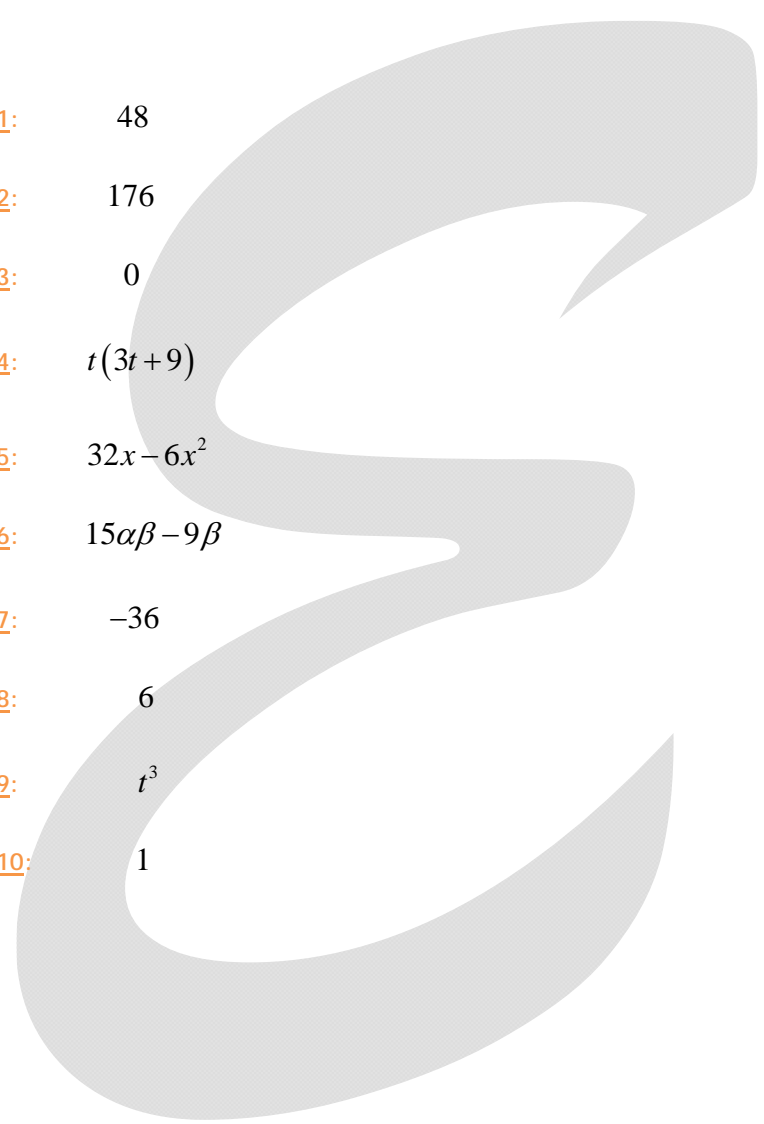
Problema 9:

$$\begin{vmatrix} 0 & 1 & 2 & 0 & 0 \\ 0 & 0 & t & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & -1 & t \\ t & 1 & 3 & -1 & (1-t) \end{vmatrix}$$

Problema 10:

$$\begin{vmatrix} 0 & 0 & 0 & 0 & 0 & \frac{1}{2} \\ 0 & 0 & 0 & 0 & 2 & -10 \\ 0 & 0 & 0 & 3 & -2 & 5 \\ 0 & 0 & 1 & -33 & x & (1-\alpha) \\ 0 & -1 & t^2 & 12 & 2\beta & a\beta \\ \frac{1}{3} & 1 & -1 & x+1 & 3 & 75 \end{vmatrix}$$

Soluciones

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- A large, light gray, stylized letter 'S' watermark is centered on the page, partially overlapping the list of solutions.
- Solución 1: 48
- Solución 2: 176
- Solución 3: 0
- Solución 4: $t(3t+9)$
- Solución 5: $32x-6x^2$
- Solución 6: $15\alpha\beta-9\beta$
- Solución 7: -36
- Solución 8: 6
- Solución 9: t^3
- Solución 10: 1