

TAREA BÁSICA

$$0 - 1 + 0$$

① A

1	a	g	Pa
0	1	1	0
0	1	1	0 - 1

$$\text{DET} = a + 1 - (-1)$$

$$a = 1 + 1 = 2$$

$$1 + a + 0 = a + 1$$

$$\text{DET} = 2$$

B

$$1 \ 0 \ 0 \ 3$$

$$0 \ 1 \ -1 \ 4 \ 1 \ 1$$

$$0 \ 1 \ 1 \ 4 \ 1 \ 1$$

$$\downarrow \quad \downarrow \quad 0 \times 3 + 0 = -3$$

$$0 + 3 + 0 = 3$$

$$\text{DET} = -3 - (+3)$$

$$\text{DET} = -6$$

②

$$x^2 \ 0 \ x \ -\frac{7}{10}$$

$$75 \ 0 \ 5 \ 2$$

$$10 \ 0 \ 4 \ 2$$

$$7 \ 1 \ 7 \ 7$$

$$\downarrow \quad -5 + 8x^2 + 75x$$

$$x^2 \ x \ x \ x \ x^2$$

$$\textcircled{1} \text{ A} \quad \begin{vmatrix} 1 & a & 0 \\ 0 & 1 & 0 \\ 0 & 1 & 0 \end{vmatrix} \quad \begin{matrix} \text{DET} = a+1 - (-1) \\ a = 1+1=2 \end{matrix}$$

$$1+a+0 = a+1$$

$$\text{DET A} = 2$$

$$\textcircled{B} \quad \begin{vmatrix} 1 & 0 & 0 & 3 \\ 0 & 1 & -1 & 4 \\ 0 & 0 & 0 & 3 \\ 0 & 1 & 1 & 4 \end{vmatrix} \quad \begin{matrix} \text{DET} = -3 - (+3) \\ \text{DET} = -6 \end{matrix}$$

$$\checkmark \quad \checkmark \quad 0+3+0 = -3$$

$$0+3+0 = 3$$

$$\textcircled{2} \quad \begin{vmatrix} x^2 & 0 & x & -\frac{7}{20} \\ 75 & 0 & 5 & 2 \\ 10 & 0 & 4 & 2 \\ 7 & 1 & 7 & 7 \end{vmatrix} \quad \begin{matrix} \downarrow -5 + 8x^2 + 75x \\ 10x^2 + 20x - 3 - (-5 + 8x^2 + 75x) \\ 10x^2 + 20x - 3 + 5 - 8x^2 - 75x \\ 2x^2 + 15x + 2 \end{matrix}$$

$$\Delta = s^2 - 4 \cdot 2 \cdot 2 \quad x^2 = -5 - 3 + 2 - 8 = -2$$

$$\Delta = 25 - 16 \quad x = -5 \pm \sqrt{9} \quad \frac{\sqrt{9}}{2 \cdot 2} = \frac{-5 \pm 3}{4} = \frac{-2}{4} = -\frac{1}{2}$$

$$\Delta = 9 \quad x = -5 \pm \sqrt{9} \quad x = -\frac{5+3}{4} = -\frac{2}{4} = -\frac{1}{2}$$

DISTOCOS

③

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

$$DET = -2x^3 + x^2 + 3$$

ALTERNATIVA A

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

$$0+0+0 - 1+0+0$$

$$DET = -1 \cdot 3 = -3 \text{ ÷ IMPAR} = 3$$

TROCA DESINAL

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

$$DET = x \cdot 7 = -x^2$$

IMPAR

TROCA DESINAL

$$DET = x^2$$

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

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

$$\begin{vmatrix} 1 & x & 0 & 0 & 0 \\ 0 & 1 & x & 0 & 0 \end{vmatrix}$$

$$\begin{vmatrix} x & 0 & 0 & 0 & 0 \\ 0 & x & 0 & 0 & 0 \end{vmatrix}$$

$$DET = x^7, (-2) = -2x^3$$

DSTQQSS

$$(4) \quad A = \begin{bmatrix} x & 0 & 0 & 0 & 0 \\ 0 & x & 1 & 0 & 0 \\ 0 & 0 & x & 1 & 0 \\ 0 & 0 & 0 & x & k \\ 0 & 0 & 0 & 1 & x \end{bmatrix} \xrightarrow{\cdot} \begin{bmatrix} x & 1 & 0 & 0 \\ 0 & x & 1 & 0 \\ 0 & 0 & x & k \\ 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 & x \end{bmatrix} \xrightarrow{\cdot} \begin{bmatrix} x & 1 & 0 & 0 \\ 0 & x & 1 & 0 \\ 0 & 0 & x & k \\ 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 & x \end{bmatrix}$$

$$\text{DET} = x^3 - xk$$

$$\text{DET} = x(x^3 - xk)$$

$$\text{DET} = x^4 - x^2 k$$

$$\text{DET} = x(x^4 - x^2 k)$$

$$\text{DET} = x^5 - x^3 k$$

ALTERNATIVA D

$$F(-2) = 8 \rightarrow x^5 - x^3 k = 8$$

$$(-2)^5 - (-2)^3 \cdot k = 8$$

$$-32 + 8k = 8$$

$$+8k = 8 + 32$$

$$k = 40 = 5$$

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