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Lista de exercícios

1. $A = \begin{vmatrix} 1 & a & 0 \\ 0 & 1 & 1 \\ 0 & -1 & 1 \end{vmatrix}$ 1. cof(A₁₁)
↓ 2
 $\det A = 2$

$$\begin{vmatrix} 1 & 1 \\ -1 & 1 \end{vmatrix} = 1 - (-1) = 2$$

$B = \begin{vmatrix} 1 & 0 & 0 & 3 \\ a & 1 & -1 & 4 \\ \rightarrow 0 & 0 & 0 & 3 \\ 0 & 1 & 1 & 4 \end{vmatrix}$ 3. cof(A₃₄) → 3+4=7
3. 2 ↓
impar
 $\det B = -6$

$$\begin{vmatrix} 1 & 0 & 0 \\ a & 1 & -1 \\ 0 & 0 & 1 \end{vmatrix} = 1 - (-1) = 1 + 1 = 2$$

$$\begin{matrix} -1 & 1 & 0 & 0 & 0 \\ 0 & a & 1 & -1 & 0 \end{matrix}$$

$$1 + 0 + 0 = 1$$

$$0 + (-1) + 0 = -1$$

$$\begin{array}{c}
 \text{2.} \quad \left| \begin{array}{ccccc} x^2 & 0 & x & -\frac{1}{10} \\ 7,5 & 0 & 5 & 2 \\ 10 & 0 & 4 & 2 \\ 1 & 1 & 1 & 1 \end{array} \right| \quad \text{3. cof}(\bar{A}_{42}) \\
 \begin{array}{l} -5 \quad 8x^2 \quad 15x \quad (10x^2 + 20x - 3) - (-5 + 8x^2 + 15x) \\ x^2 \quad x \quad -\frac{1}{10} \quad x^2 \quad x \\ 7,5 \quad 5 \quad 2 \quad 7,5 \quad 5 \\ 10 \quad 4 \quad 2 \quad 10 \quad 4 \end{array} \\
 \begin{array}{l} 2x^2 + 5x + 2 \\ 10x^2 - 20x - 3 \\ \Delta = 5^2 - 4 \cdot 2 \cdot 2 \\ \Delta = 25 - 16 \\ \Delta = 9 \\ x = -5 \pm \sqrt{9} \\ x_1 = -2 \quad x_2 = -\frac{1}{2} \end{array} \\
 x = \frac{-5 \pm 3}{4} \\
 \begin{array}{l} x_1 = \frac{-5 + 3}{4} = \frac{-2}{4} = -\frac{1}{2} \\ x_2 = \frac{-5 - 3}{4} = \frac{-8}{4} = -2 \end{array} \\
 \text{alternativa (B)} \quad x_1 = -2 \text{ ou } x_2 = -\frac{1}{2} //
 \end{array}$$

$$\begin{array}{c}
 x_1 = \frac{-5 + 3}{4} = \frac{-2}{4} = -\frac{1}{2} // \\
 x_2 = \frac{-5 - 3}{4} = \frac{-8}{4} = -2 // \\
 \text{alternativa (B)} \quad x_1 = -2 \text{ ou } x_2 = -\frac{1}{2} //
 \end{array}$$

$$\begin{array}{c}
 \text{3.} \quad \left| \begin{array}{ccccc} x & 0 & 0 & 3 \\ -1 & x & 0 & 0 \\ 0 & -1 & x & 1 \\ 0 & 0 & -1 & -2 \end{array} \right| \quad \begin{array}{l} -1 \text{ cof}(\bar{A}_{42}) - \text{imp} \\ -1 \cdot x^2 + 3 \quad -2 \cdot x^3 \\ -x^2 + 3 \rightarrow x^2 + 3 \end{array} \\
 \text{alternativa (A)} \quad -2x^3 + x^2 + 3 // \\
 \begin{array}{c} x \quad 0 \quad 3 \quad | \quad x \quad 0 \quad 0 \\ -1 \quad x \quad 0 \quad | \quad -1 \quad x \quad 0 \\ 0 \quad 0 \quad -1 \quad 1 \quad | \quad 0 \quad 0 \quad -1 \quad x^3 \\ 0 \quad x \quad 0 \quad 3 \quad 3 \quad 0 \quad x \quad 0 \quad 0 \quad 0 \\ 0 \quad -1 \quad x \quad 0 \quad 0 \quad 0 \quad -1 \quad x \quad 0 \quad 0 \end{array} \\
 \text{libra}
 \end{array}$$