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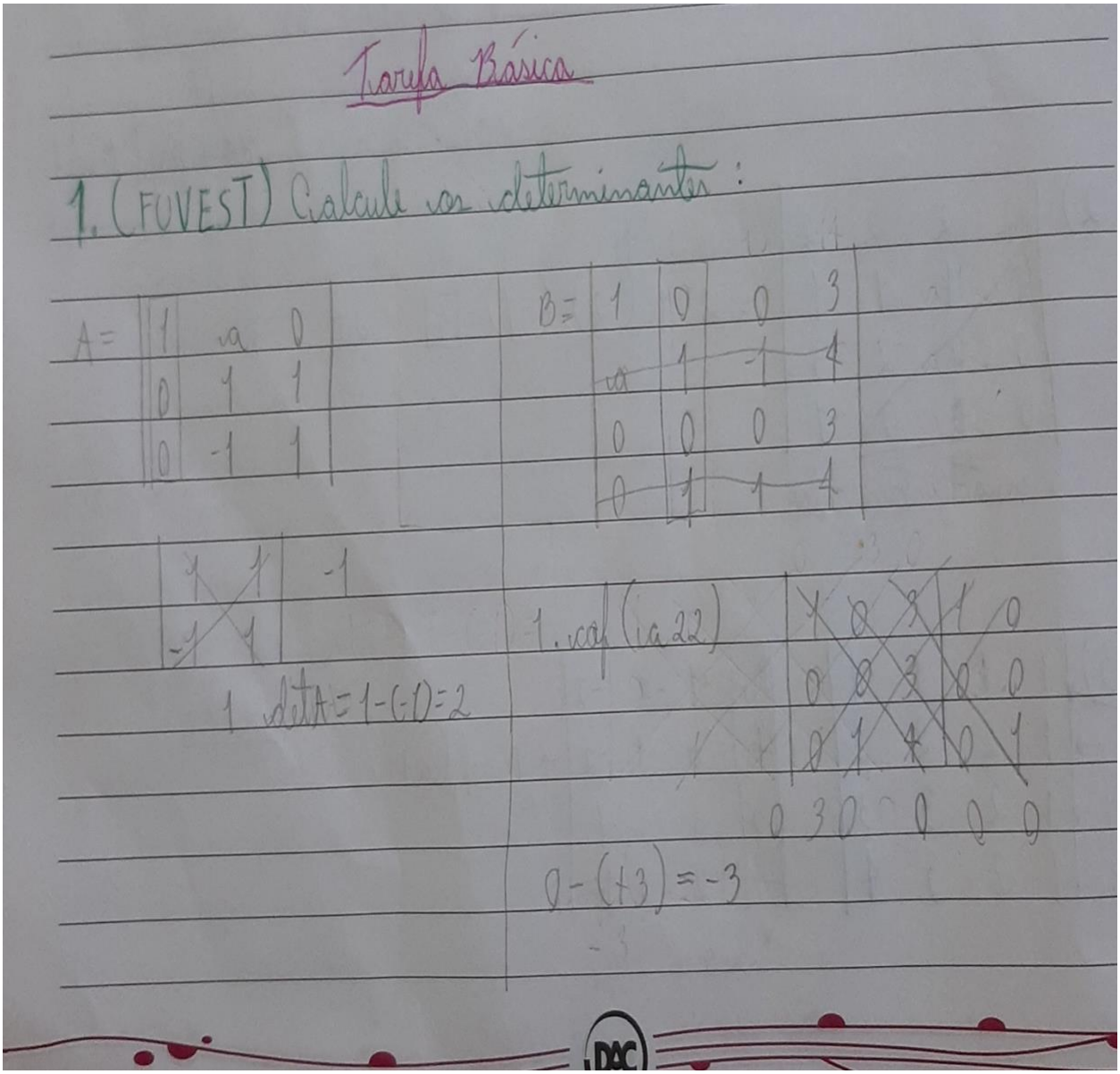
Sala: CTII 317



1. cof (i,j+2)

x	0	3	1	0	
a	1	4	a	-1	
0	0	3	0	0	$-3-0=-3$

$0 \quad 0 \quad 0 \quad -3 \quad 0 \quad 0$

$\det B = (-3) + (-3) = -6$

2) (FATEC) Calcule x na equação

x^2	0	x	$-\frac{1}{10}$	
7,5	0	5	2	$=0$
10	0	4	2	
1	1	1	1	

$-5 \quad 8x^2 \quad 15x$

x^2	x	$-\frac{1}{10}$	x^2	x	
7,5	5	2	7,5	5	$(10x^2+20x-3)-(8x^2+15x-5)$
10	4	2	10	4	$2x^2+5x+2=0$

$10x^2 \quad 20x \quad -3$

$\Delta = b^2 - 4.a.c$

$\Delta = (5)^2 - 4.2.2$

$\Delta = 25 - 16$

$\Delta = 9$

$x = \frac{-b \pm \sqrt{\Delta}}{2.a}$

$x = \frac{-5 \pm \sqrt{9}}{2.2}$

$x = \frac{-5 \pm 3}{4}$

$x' = \frac{-5+3}{4} = \frac{-2}{4} = -\frac{1}{2}$

$x'' = \frac{-5-3}{4} = \frac{-8}{4} = -2$

3) (PUCSP) O determinante $\begin{vmatrix} x & 0 & 0 & 3 \\ -1 & x & 0 & 0 \\ 0 & -1 & x & 1 \\ 0 & 0 & -1 & -2 \end{vmatrix}$ representa o polinômio

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

$x \cdot \text{cof}(11)$

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

$-2x^2 \quad 0 \quad 0$

$-2x^2 - (-x)$

$-2x^2 + x$

$x \cdot (-2x^2 + x)$

$-2x^3 + x^2$

$-1 \cdot \text{cof}(21)$ → ímpar

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

$0 \quad 0 \quad 3$

-3 → ímpar

$(-1) \cdot (-3) = 3$

$-2x^3 + x^2 + 3$ letra A

4) (UFSCAR) Sejam a matriz A e a função $f: \mathbb{R} \to \mathbb{R}$ tal que $f(x) = \det A$ e $f(-2) = 8$, então k vale

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

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

$x^3 \cdot (x^2 - k) + x^5 - kx^3$

$f(x) = x^5 - kx^3$

$f(-2) = (-2)^5 - k(-2)^3 = 8$

$f(-2) = -32 + 8k = 8$

$f(-2) = 8k = 8 + 32$

$f(-2) = 8k = 40$

$f(-2) = k = \frac{40}{8}$

$k = 5$ letra D