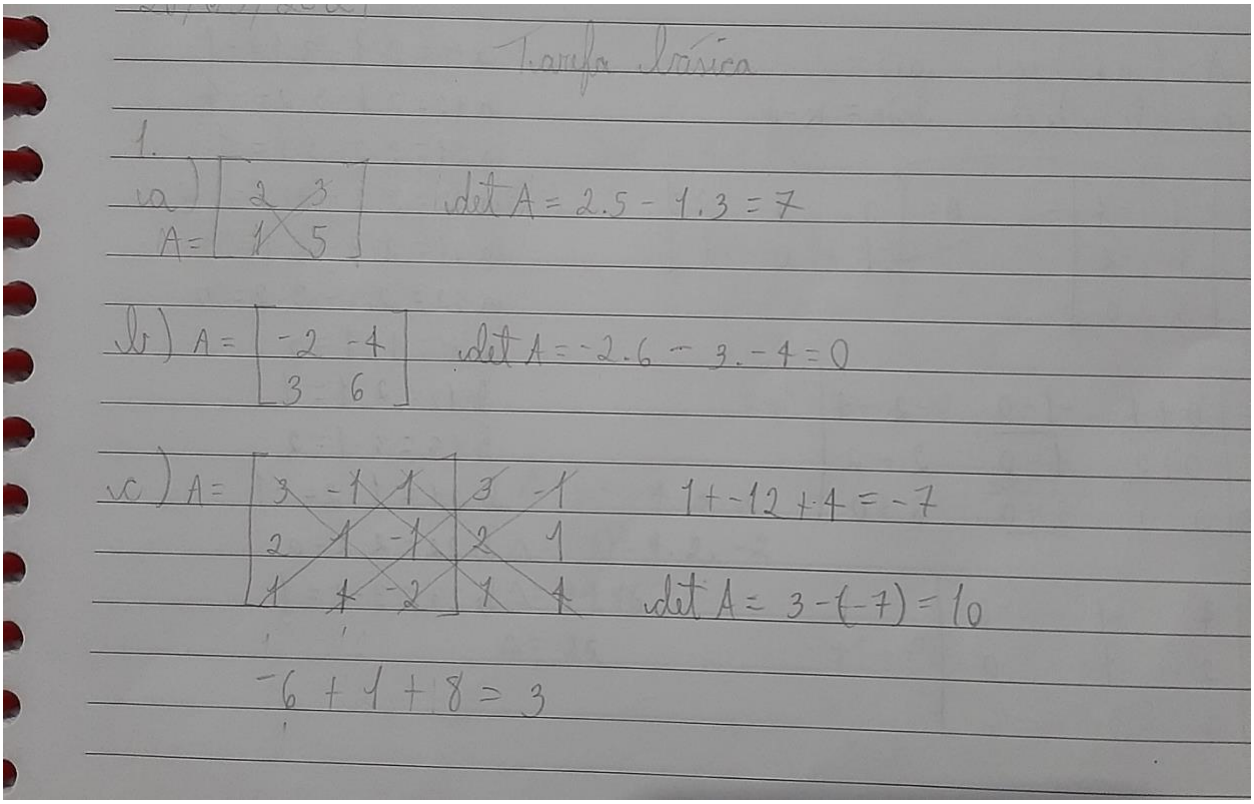
Nome: Victória Ferreira de Souza

Sala: CTII 317



d)
$$\begin{bmatrix} 3 & 2 & -1 \\ 2 & 3 & 1 \\ 1 & 1 & 1 \end{bmatrix} \begin{matrix} 3 & 2 \\ 2 & 3 \\ 1 & 1 \end{matrix}$$

$36 + 2 + -2 = 36$

$\det A = 36 - 16 = 20$

$-3 + 3 + 16 = 16$

2.

$A = (a_{ij})$ → matriz quadrada de terceira

$$a = \begin{cases} -3, \text{ se } i = j \\ 0, \text{ se } i \neq j \end{cases}$$

$$A = \begin{bmatrix} -3 & 0 & 0 \\ 0 & -3 & 0 \\ 0 & 0 & -3 \end{bmatrix} \begin{matrix} -3 & 0 \\ 0 & -3 \\ 0 & 0 \end{matrix}$$

$0 + 0 + 0$

$\det A = -27$ letra A

$-27 + 0 + 0 =$

3.

$$\begin{vmatrix} x & 1 & x \\ 3 & x & 4 \\ 1 & 3 & 3 \end{vmatrix} = -3$$

x	1	x	x	1
3	x	1	3	x
1	3	3	1	3

$x^2 + 12x + 9$

$3x^2 + 1 + 9x$

$(3x^2 + 9x + 1) - (x^2 + 12x + 9)$

$2x^2 - 3x - 5 = -3$

$2x^2 - 3x - 5 + 3 = 0$

$2x^2 - 3x - 2 = 0$

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

$\Delta = (-3)^2 - 4.2.-2$

$\Delta = 9 + 16$

$\Delta = 25$

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

$x = \frac{3 \pm \sqrt{25}}{2.2}$

$x^1 = \frac{3+5}{4} = \frac{8}{4} = 2$

$x^2 = \frac{3-5}{4} = \frac{-2:2}{4:2} = -\frac{1}{2}$

$\{-1/2; 2\}$ letra E

5. $A = (a_{ij})_{3\times 2}$ $a_{ij} = 2i - 3j$

$B = (b_{jk})_{2\times 3}$ $b_{jk} = k - j$

$$A = \begin{bmatrix} -1 & -4 \\ 1 & -2 \\ 3 & 0 \end{bmatrix} \qquad B = \begin{bmatrix} 0 & 1 & 2 \\ -1 & 0 & 1 \end{bmatrix}$$

$a_{11} = 2.1 - 3.1 = -1$

$a_{12} = 2.1 - 3.2 = -4$

$a_{21} = 2.2 - 3.1 = 1$

$a_{22} = 2.2 - 3.2 = -2$

$a_{31} = 2.3 - 3.1 = 3$

$a_{32} = 2.3 - 3.2 = 0$

$b_{11} = 1 - 1 = 0$

$b_{12} = 2 - 1 = 1$

$b_{13} = 3 - 1 = 2$

$b_{21} = 1 - 2 = -1$

$b_{22} = 2 - 2 = 0$

$b_{23} = 3 - 2 = 1$

$$A.B = \begin{bmatrix} 0+4 & -1-0 & -2-4 \\ 0+2 & 1-0 & 2-2 \\ 0-0 & 3+0 & 6+0 \end{bmatrix}$$

$$A.B = \begin{bmatrix} 4 & -1 & -6 \\ 2 & 1 & 0 \\ 0 & 3 & 6 \end{bmatrix}$$

$$A.B = \begin{bmatrix} 4 & -1 & -6 & 4 & -1 \\ 2 & 1 & 0 & 2 & 1 \\ 0 & 3 & 6 & 0 & 3 \end{bmatrix}$$

$24 + 0 + -36 = -12$

$\det A.B = -12 - (-12) = 0$ letra C

$0 + 0 + -12 = -12$

6. $$A = \begin{bmatrix} 2 & 0 & -1 \\ -1 & 1 & 0 \end{bmatrix} \qquad B = \begin{bmatrix} 1 & -1 \\ -1 & 1 \\ 0 & 2 \end{bmatrix}$$

$$A.B = \begin{bmatrix} 2+0+0 & -2+0-2 \\ -1-1+0 & 1+1+0 \end{bmatrix} \qquad A.B = \begin{bmatrix} 2 & -4 \\ -2 & 2 \end{bmatrix}$$

$\det A.B = 4 - 8 = -4$ letra D