DATA ___/___/___

5-

$$a = \begin{bmatrix} a^{11} & a^{12} \\ a^{21} & a^{22} \\ a^{31} & a^{32} \end{bmatrix} \quad a_{ij} = 12 - 3j \longrightarrow \quad A \begin{bmatrix} 11 & 10 \\ 11 & 10 \\ 11 & 10 \end{bmatrix}$$

$$B = \begin{bmatrix} b^{11} & b^{12} & b^{13} \\ b^{21} & b^{22} & b^{23} \end{bmatrix} \quad b_{ij} = a - 2j \longrightarrow \quad B \begin{bmatrix} -1 & 0 & 1 \\ -3 & -2 & -1 \end{bmatrix}$$

$$A.B = \begin{bmatrix} 11.-1+(10.-3) & 11.0+(10.-2) & 11.1+(10.-1) \\ = & = & = \\ = & = & = \end{bmatrix}$$

$$C = \begin{bmatrix} -41 & -20 & 1 & -41 & -20 \\ -41 & -20 & 1 & -41 & -20 \\ -41 & -20 & 1 & -41 & -20 \end{bmatrix} = 0$$

C

6.

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

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

$$\begin{bmatrix} 2 & 0 & -1 \\ -1 & 1 & 0 \end{bmatrix} \quad \begin{matrix} 2+0\cdot 0 & -2+0\cdot 2 \\ -1-1+0 & +1+1+0 \end{matrix}$$

$$A.B \begin{vmatrix} 2 & -4 \\ -2 & 2 \end{vmatrix} = 4 - 8 = -4$$

D

S T Q Q S S D

DATA ____ / ____ / ____

4-

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

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

$2(x+1).0 = 0$

$(x-1).(-1).(-1) \Rightarrow x+1.(-1) = x-1$

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

$x-1 \quad -1 \quad 0$

$0 \quad x+1 \quad -1$

$(x-1).(x+1).(x+1) \Rightarrow$

$x^2 + x - x - 1.(x+1)$

$x^3 + x^2 - x - 1$

$0.(-1).0 = 0$

$2.(-1).(-1) = 2$

Primária:

$x^3 + x^3 - x - 1 + 0 + 2$

$x^3 + x^2 - x + 1$

Secundária:

$0 + x - 1 + 0 = x - 1$

$x^3 + x^2 - x + 1 = (x-1) = 2$

$x^3 + x^2 - x + 1 = x + 1 = 2 = 0$

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

a b c

$\frac{-b}{a} = x^1 + x^2$

$\frac{-1}{1} = -1$

C

DATA ___/___/___

2.)

$a_{ij} = \begin{cases} -3, \text{ se } i=j \\ 0, \text{ se } i \neq j \end{cases}$ então determine do A nesse

$$\begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{vmatrix} \quad \begin{vmatrix} -3 & 0 & 0 \\ 0 & -3 & 0 \\ 0 & 0 & -3 \end{vmatrix} \begin{matrix} -3 & 0 \\ 0 & -3 \\ 0 & 0 \end{matrix} = -27$$

-27

(A)

3-

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

$3x^2 + 4 + 9x = -3$

$1x^2 + 12x + 9$

$(3x^2 + 4 + 9x) - (1x^2 + 12x + 9) = -3$

$3x^2 + 4 + 9x - x^2 - 12x - 9 = -3$

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

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

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

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

$\Delta = 9 - 4.2.(-2)$

$9 + 16$

$\Delta = 25$

$\frac{-(-3) \pm 5}{4}$

$x' = \frac{-1}{2}$

$x^2 = 2$

(E)

DATA ___ / ___ / ___

Tarefa Básica 3

1.

a) $\begin{bmatrix} 2 & 3 \\ 1 & 5 \end{bmatrix} = (2.5) - (1.3)$

$10 - 3$

7

b) $\begin{bmatrix} -2 & -4 \\ 3 & 6 \end{bmatrix} = (-2.6) - (3.-4)$

$-12 - -12$

0

c) $\begin{vmatrix} 3 & -1 & 1 \\ 2 & 1 & -1 \\ 1 & 4 & -2 \end{vmatrix} \begin{matrix} 3 & -1 \\ 2 & 1 \\ 1 & 4 \end{matrix}$

$-6+1+8 = 3$

$1 - 12 + 4 = -7$

$3 + 7 = 10$

d) $\begin{bmatrix} 3 & 2 & -1 & 3 & 2 \\ 2 & 3 & 1 & 2 & 3 \\ 1 & 1 & 4 & 1 & 1 \end{bmatrix}$

$(36 + 2 - 2) - (-3 + 3 + 16)$

$36 - 16$

20