

Tarefa Básica

1- $A = (a_{ij})_{(3 \times 2)}$ de $a_{ij} = 2i + 3j$

$$A = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \\ a_{31} & a_{32} \end{bmatrix}$$

$$a_{11} = 2 + 3 = 5$$

$$a_{12} = 2 + 6 = 8$$

$$a_{21} = 4 + 3 = 7$$

$$a_{22} = 4 + 6 = 10$$

$$a_{31} = 6 + 3 = 9$$

$$a_{32} = 6 + 6 = 12$$

$$A = \begin{pmatrix} 5 & 8 \\ 7 & 10 \\ 9 & 12 \end{pmatrix}$$

2- 2×2

$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix}$$

$$(a_{ij}) = i^2 + 4j^2$$

$$a_{11} = 1 + 4 = 5$$

$$a_{12} = 1 + 16 = 17$$

$$a_{21} = 4 + 4 = 8$$

$$a_{22} = 4 + 16 = 20$$

$$A = \begin{bmatrix} 5 & 17 \\ 8 & 20 \end{bmatrix}$$

3-

x, y e z

$$\begin{bmatrix} 1 & x+2 \\ y-1 & z+1 \end{bmatrix} = \begin{bmatrix} 1 & -x \\ 2y & -2z \end{bmatrix}$$

$$x+2 = 1 \quad -x = 1$$

$$x = -1$$

$$y-1 = 2y = 2$$

$$y = -1$$

$$z+1 = -2z = 1$$

$$z = -\frac{1}{3}$$

$$3$$

4-

$$\begin{bmatrix} 3 & -x \\ 3x & x \end{bmatrix} = \begin{bmatrix} 3 & y \\ 2x+1 & z-1 \end{bmatrix}$$

$$-x = -1 \quad x = 1 \quad 3x = 3$$

$$x = 1$$

$$z = 1 = 1$$

$$y = -1$$

$$z = 2$$

$$y = -1$$

5- 4×4 aij

$$\rightarrow 1a2, 2a1, 2a3, 3a2, 3a4, 4a3 = \sqrt{2}$$

$$\rightarrow 1a3, 3a1, 2a4, 4a2 = \sqrt{2}$$

distância entre

1a1 (a11)

a22

a33

a44

a44

$$A = \begin{bmatrix} 0 & 1 & \sqrt{2} & 1 \\ 1 & 0 & 1 & \sqrt{2} \\ \sqrt{2} & 1 & 0 & 1 \\ 1 & \sqrt{2} & 1 & 0 \end{bmatrix}$$

6-

$$A = \begin{bmatrix} -1 \\ 2 \\ 3 \end{bmatrix}$$

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

$$2A - B$$

$$2A = \begin{bmatrix} -2 \\ 4 \\ 6 \end{bmatrix} - B = \begin{bmatrix} 0 \\ -2 \\ 1 \end{bmatrix} = \begin{bmatrix} -2 \\ 6 \\ 5 \end{bmatrix}$$

7-

$$A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \\ 5 & 6 \end{bmatrix} - B = \begin{bmatrix} -1 & 3 & 2 \\ 2 & 0 & 1 \end{bmatrix}$$

$$A - B$$

$$\begin{bmatrix} 2 & 0 \\ 0 & 4 \\ 3 & 5 \end{bmatrix}$$

$$10 \cdot \begin{bmatrix} x & 8 \\ 10 & y \end{bmatrix} \quad N = \begin{bmatrix} y & 6 \\ 12 & x+4 \end{bmatrix} \quad P = \begin{bmatrix} 7 & 16 \\ 23 & 13 \end{bmatrix}$$

$$\begin{matrix} 3M & 2N & P \\ 2 & 3 & \end{matrix}$$

$$\begin{bmatrix} 3x & 12 \\ 2 & 3y \\ 13 & 2 \end{bmatrix} \quad \begin{bmatrix} 2y & 4 \\ 3 & 8 \\ 2(x+4) & 3 \end{bmatrix} \quad P = \begin{bmatrix} 7 & 16 \\ 23 & 13 \end{bmatrix}$$

$$\frac{3x}{2} + \frac{2y}{3} = 7 - 9x + 4y = 42 \quad \frac{3y}{2} + \frac{2(x+4)}{3} = 13 - 9y + 4x$$

$$9y - 4y + 4x - 9x = 62 - 42$$

$$5y - 5x = 20$$

$$5(y-x) = 20 = \textcircled{4}$$