



S T Q Q S S D

NOME: João Victor

Turma: CT11348

Prontuário: 1990527

Tarefa básica.

1)

$$A = \begin{pmatrix} A_{11} & A_{12} \\ A_{21} & A_{22} \\ A_{31} & A_{32} \end{pmatrix}$$

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

2)

$$A = \begin{pmatrix} A_{11} & A_{12} \\ A_{21} & A_{22} \end{pmatrix}$$

$$A_{1j} = \begin{bmatrix} 5 & 17 \\ 8 & 20 \end{bmatrix}$$

A

3)

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

$$1 = 1$$

$$\begin{aligned} y-1 &= 2y \\ -1 &= y \end{aligned}$$

$$z+1 = -2z$$

$$3z = -1$$

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

$$x+2 = -x$$

$$2x = -2$$

$$x = -1$$

LOVE
PARIS



4)

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

$$3 = 3$$

$$-x = y$$

$$x = z-1$$

$$3x = 2x + 1$$

$$-1 = y$$

$$1 = z-1$$

$$x = 1$$

$$2 = z$$

5)

$$A_{11} = 0$$

$$A_{31} = \sqrt{2}$$

$$A_{12} = 1$$

$$A_{32} = 1$$

$$A_{13} = \sqrt{2}$$

$$A_{33} = 0$$

$$A_{14} = 1$$

$$A_{34} = 1$$

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

(B)

$$A_{21} = 1$$

$$A_{41} = 1$$

$$A_{22} = 0$$

$$A_{42} = \sqrt{2}$$

$$A_{23} = 1$$

$$A_{43} = 1$$

$$A_{24} = \sqrt{2}$$

$$A_{44} = 0$$

6)

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

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

$$2A = \begin{bmatrix} -2 \\ 4 \\ 6 \end{bmatrix}$$

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

(D)



STQQS SD

//

7)

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

$$A - B^T = \begin{bmatrix} 2 & 0 \\ 0 & 4 \\ 3 & 5 \end{bmatrix} \quad \textcircled{B}$$

8)

$$A = \begin{bmatrix} 2 & -1 & 2y \\ x & 0 & -2 \\ 4 & 3 & 2 \end{bmatrix} \quad A^T = \begin{bmatrix} 2 & x & 4 \\ -1 & 0 & 3 \\ 2y & -2 & 2 \end{bmatrix}$$

$$\begin{aligned} -1 &= x \\ 2y &= 4 \\ y &= 2 \end{aligned} \quad \begin{aligned} x &= -1 \\ -z &= 3 \\ z &= -3 \end{aligned}$$

$$-1 + 2 + (-3) = -2 \quad \textcircled{A}$$

9)

	MATRIZ A	b ₁₁	b ₁₂	b ₁₁ =1	b ₁₂ =0
A ₁₁ - A ₁₂	$\begin{bmatrix} 1 & 3 \end{bmatrix}$	b ₂₁	b ₂₂	b ₂₁ =0	b ₂₂ =2
A ₂₁ - A ₂₂	$\begin{bmatrix} 3 & 1 \end{bmatrix}$	b ₃₁	b ₃₂	b ₃₁ =0	b ₃₂ =0
A ₃₁ - A ₃₂	$\begin{bmatrix} 4 & 5 \end{bmatrix}$				

$$A_{11}=1 \quad A_{12}=2+1=3$$

$$A_{21}=2+1=3 \quad A_{22}=1$$

$$A_{31}=3+1=4 \quad A_{32}=3+2=5$$

MATRIZ B

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

spiral®

LOVE
PARIS
SAINT-GERMAIN



S T Q Q S S D

/ /

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

10)

$$m = \begin{bmatrix} x & 8 \\ 10 & y \end{bmatrix}, \quad n = \begin{bmatrix} 8 & 6 \\ 12 & x+4 \end{bmatrix}, \quad p = \begin{bmatrix} 7 & 16 \\ 23 & 13 \end{bmatrix}$$

$$\frac{3m}{2} = \begin{bmatrix} \frac{3x}{2} & 12 \\ 15 & \frac{3y}{2} \end{bmatrix} \quad \frac{2n}{3} = \begin{bmatrix} \frac{2y}{3} & 4 \\ 8 & \frac{2(x+4)}{3} \end{bmatrix}$$

$$p = \begin{bmatrix} 7 & 16 \\ 23 & 13 \end{bmatrix}$$

$$\frac{3x}{2} + \frac{2y}{3} = 7 \rightarrow 9x + 4y = 42$$

$$\frac{3y}{2} + \frac{2(x+4)}{3} = 13 \rightarrow 9y + 4x + 16 = 78$$

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

$$5y - 5x = 20$$

$$5(y-x) = 4$$

$$y-x = 4 \quad \textcircled{B}$$