exercíos basicos

01.

$$A = \begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} \end{bmatrix} = A$$

$a_{11} = 2 \cdot 1 + 3 \cdot 1 = 2 + 3 = 5$

$a_{12} = 2 \cdot 1 + 3 \cdot 2 = 2 + 6 = 8$

$a_{21} = 2 \cdot 2 + 3 \cdot 1 = 4 + 3 = 7$

$a_{22} = 2 \cdot 2 + 3 \cdot 2 = 4 + 6 = 10$

$a_{31} = 2 \cdot 3 + 3 \cdot 1 = 6 + 3 = 9$

$a_{32} = 2 \cdot 3 + 3 \cdot 2 = 6 + 6 = 12$

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

Resposta: a

02.

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

$a_{11} = 1 \cdot 1^2 + 4 \cdot 1^2 = 4 + 1 = 5$

$a_{12} = 1 \cdot 1^2 + 4 \cdot 2^2 = 1 + (4 \cdot 4) = 1 + 16 = 17$

$a_{21} = 1 \cdot 2^2 + 4 \cdot 1^2 = 4 + 4 = 8$

$a_{22} = 1 \cdot 2^2 + 4 \cdot 2^2 = 4 + 16 = 20$

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

resposta: A

03.

$$x = -x = x + 2$$
$$x = -2 = x + x$$
$$x = -2 = 2x$$
$$x = -\frac{2}{2}$$
$$x = 1.$$

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

$$z = -2z = z + 1$$
$$-2z - 2 = +1$$
$$-3z = 1$$
$$z = -\frac{1}{3}$$

Resposta:
$$z = -\frac{1}{3}$$
$$x = -1$$
$$y = -1$$

04.

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

$y =$ $1y = 0 =$
       $y = -1$

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

Resposta:

$x = -1$

$z = 2$

$y = -1$

os.

$$\begin{array}{cccc} A_{11} & A_{12} & A_{13} & A_{14} \\ A_{21} & A_{22} & A_{23} & A_{24} \\ A_{31} & A_{32} & A_{33} & A_{34} \\ A_{41} & A_{42} & A_{43} & A_{44} \end{array}$$

4   0   2   3   2

▽mesmos valores

B ou D

$A_{11} = 0$ por ser a
↳ não dá que se encaixa.
DISTANCIA

Resposta : B

06-

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

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

$$A - B = \begin{bmatrix} -2 \\ 6 \\ 5 \end{bmatrix} \qquad \text{Resposta: } D$$

07-

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

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

$$A - B = \begin{bmatrix} 1-(-1) & 2-2 \\ 3-31 & 4-0 \\ 5-2 & 6-1 \end{bmatrix}$$

$$A - B = \begin{bmatrix} 2 & 0 \\ 0 & 4 \\ 3 & 5 \end{bmatrix} \qquad \text{Resposta: } B$$

08.

$$\begin{bmatrix} 2 & -1 & 2y \\ x & 0 & -2 \\ 4 & 3 & 2 \end{bmatrix}$$

$$\begin{matrix} 2 & x & 4 \\ -1 & 0 & 3 \\ 2y & -z & 2 \end{matrix}$$

$2y = 4$ $x = -1$ $-z = 3$

$y = \dfrac{4}{2}$ $z = -3$

$y = 2$

Resposta: A

$-1 - 3 + 2 = -2$

09.

$$A = \begin{bmatrix} A_{11} & A_{12} \\ A_{21} & A_{22} \\ A_{31} & A_{32} \end{bmatrix} \qquad B = \begin{bmatrix} B_{11} & B_{12} \\ B_{21} & B_{22} \\ B_{31} & B_{32} \end{bmatrix}$$

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

Resposta: C

10.

$\rightarrow$ põe

$\dfrac{3m}{2}$ as letras

$$\dfrac{3m}{2} = \begin{bmatrix} \dfrac{3x}{2} & 12 \\ 15 & \dfrac{3y}{2} \end{bmatrix}$$

$$\dfrac{2n}{3} = \begin{bmatrix} \dfrac{2y}{3} & 4 \\ 8 & \dfrac{2(x+4)}{3} \end{bmatrix}$$

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

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

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

$$9y - 4y + 4x - 9x = 62 - 42$$
$$5y - 5y = 20$$
$$5(y - x) = 20$$
$$y = x = 4$$

Resposta : B