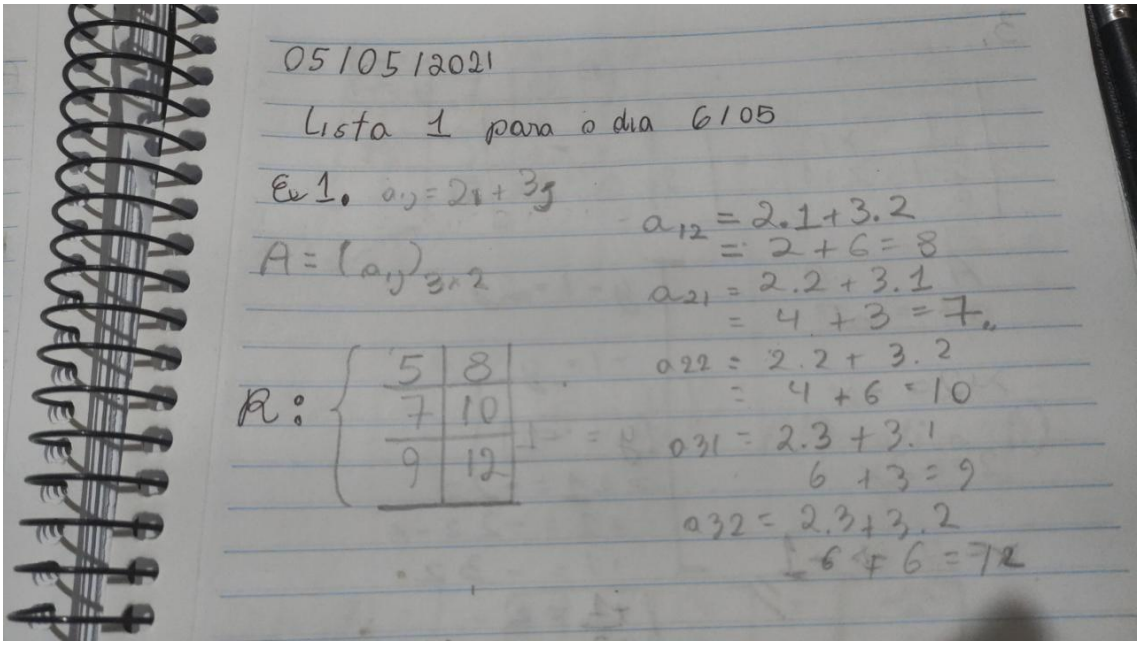
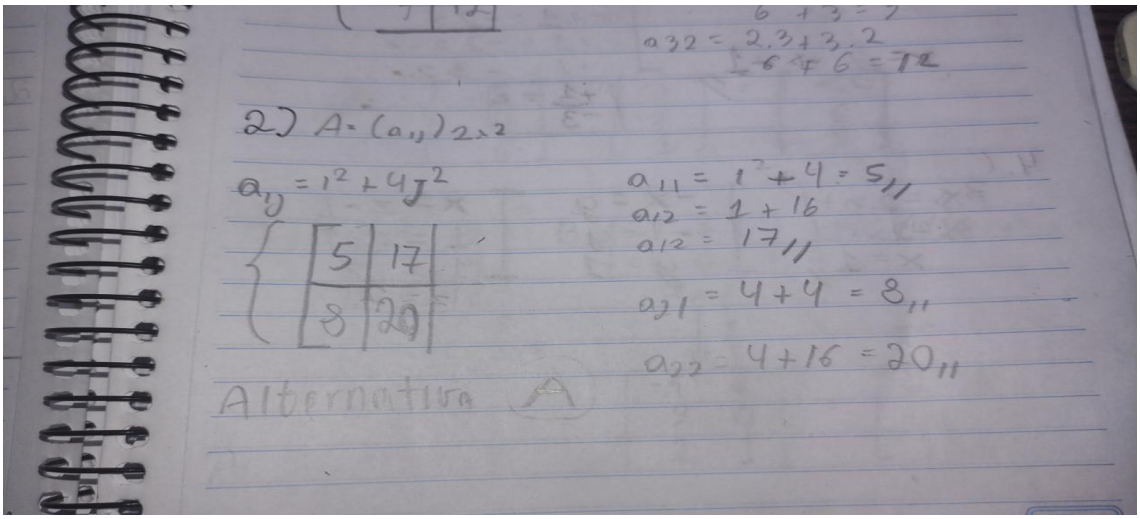
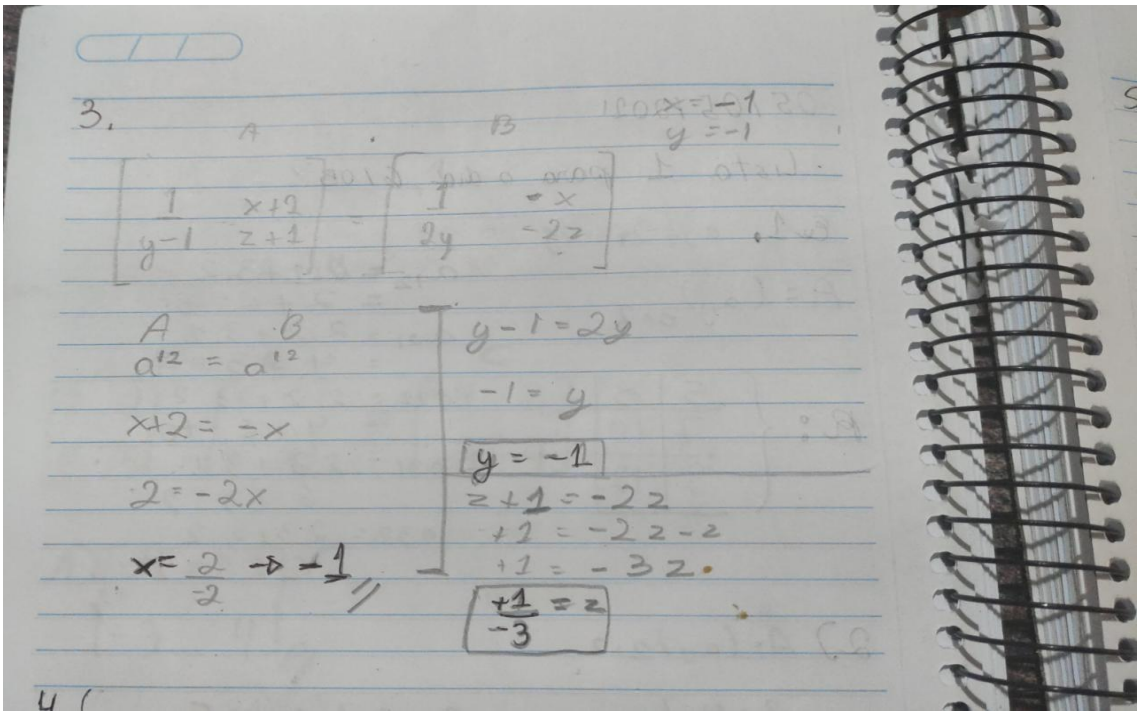
Julio Brandasse de Abreu Lima

Lista de Exercícios 06/5/21 – Matrizes.







3.

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

A B

$a^{12} = a^{12}$

$x+2 = -x$

$2 = -2x$

$x = \frac{2}{-2} \rightarrow -1$ //

$y-1 = 2y$

$-1 = y$

$y = -1$

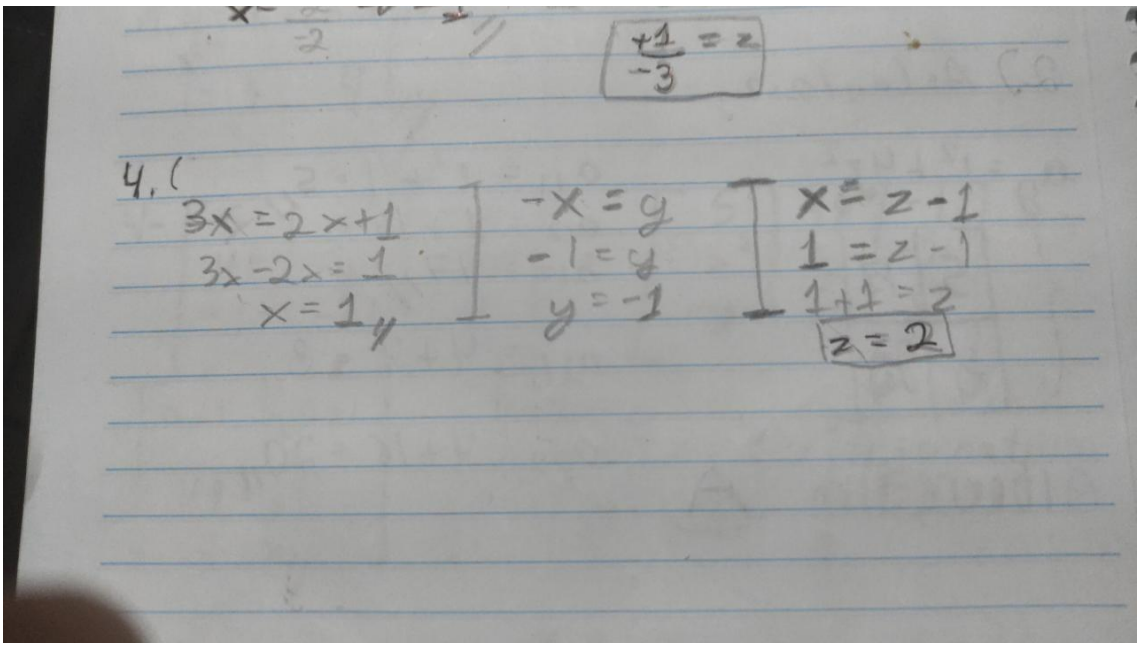
$z+1 = -2z$

$+1 = -2z-2$

$+1 = -3z$

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

4. (



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

4. (

$3x = 2x+1$

$3x-2x = 1$

$x = 1$ //

$-x = y$

$-1 = y$

$y = -1$

$x = z-1$

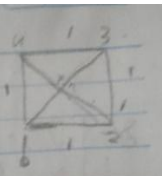
$1 = z-1$

$1+1 = z$

$z = 2$

5)

0	1	$\sqrt{2}$	1
1	0	1	$\sqrt{2}$
$\sqrt{2}$	1	0	1
1	$\sqrt{2}$	1	0



$x^2 = 1^2 + 1^2$

$x^2 = 2$

$x = \sqrt{2}$.

B) ✓

6) $A = \begin{bmatrix} -1 \\ 2 \\ 3 \end{bmatrix}$ $B = \begin{bmatrix} 0 \\ -2 \\ 1 \end{bmatrix}$ Alternativa D)

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

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

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

2×3

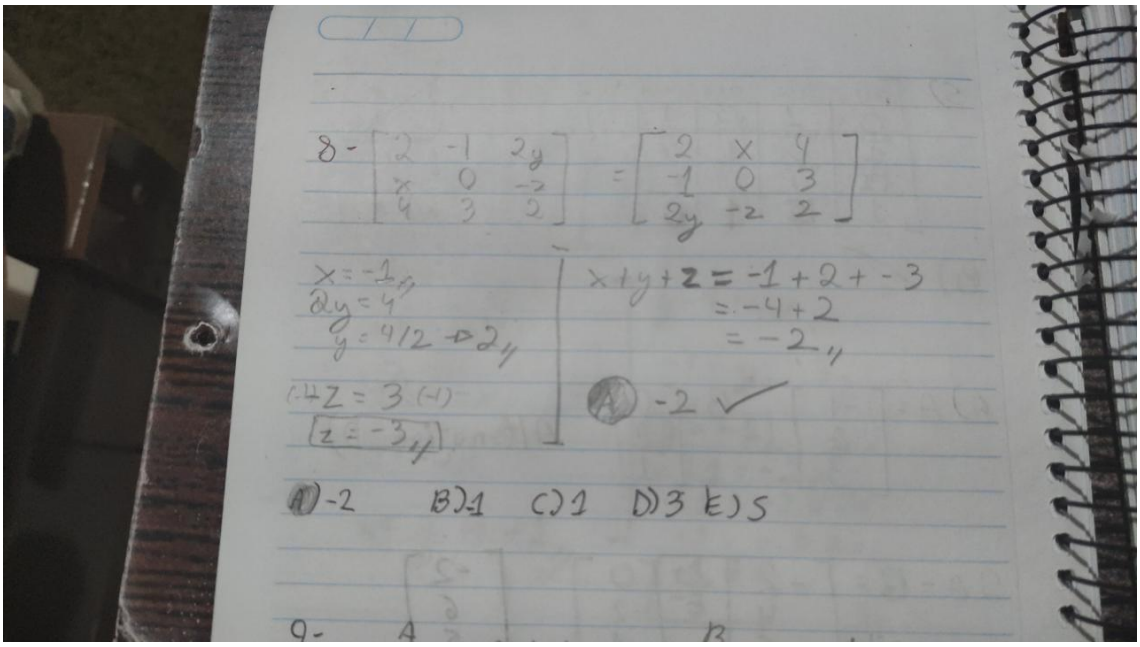
$\downarrow t_B$

3×2

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

R: Alternativa B)

tilibra



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

$x = -1$
$2y = 4$
$y = 4/2 \rightarrow 2$

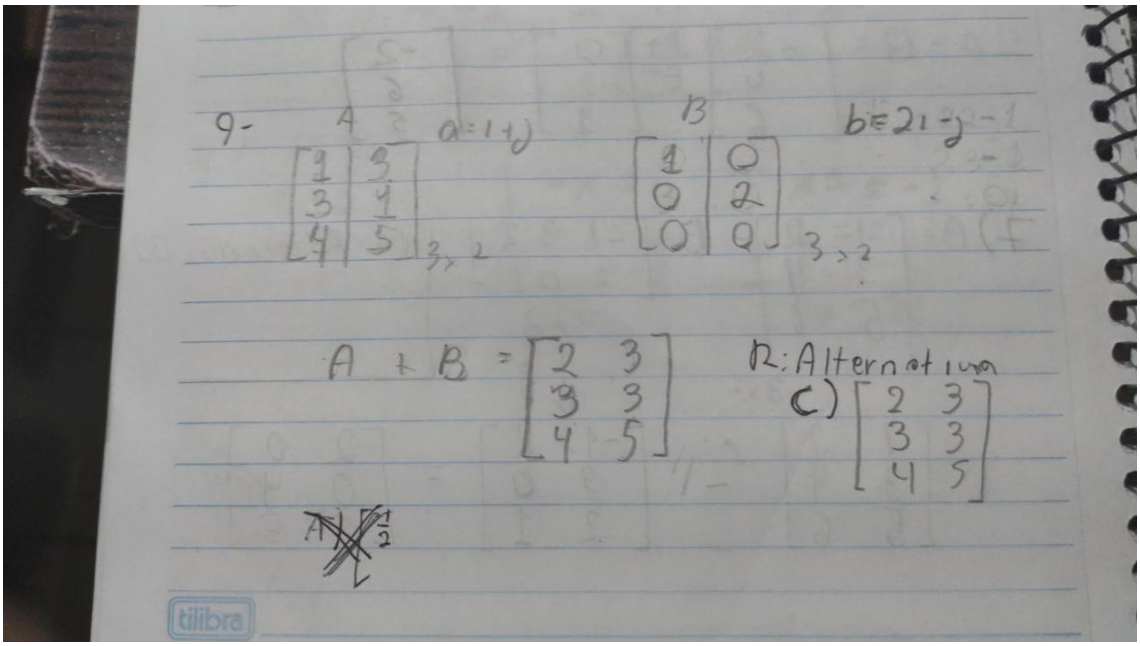
$-4z = 3(-1)$
$z = -3$

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

A) -2 ✓

A) -2 B) 1 C) 1 D) 3 E) 5

9-



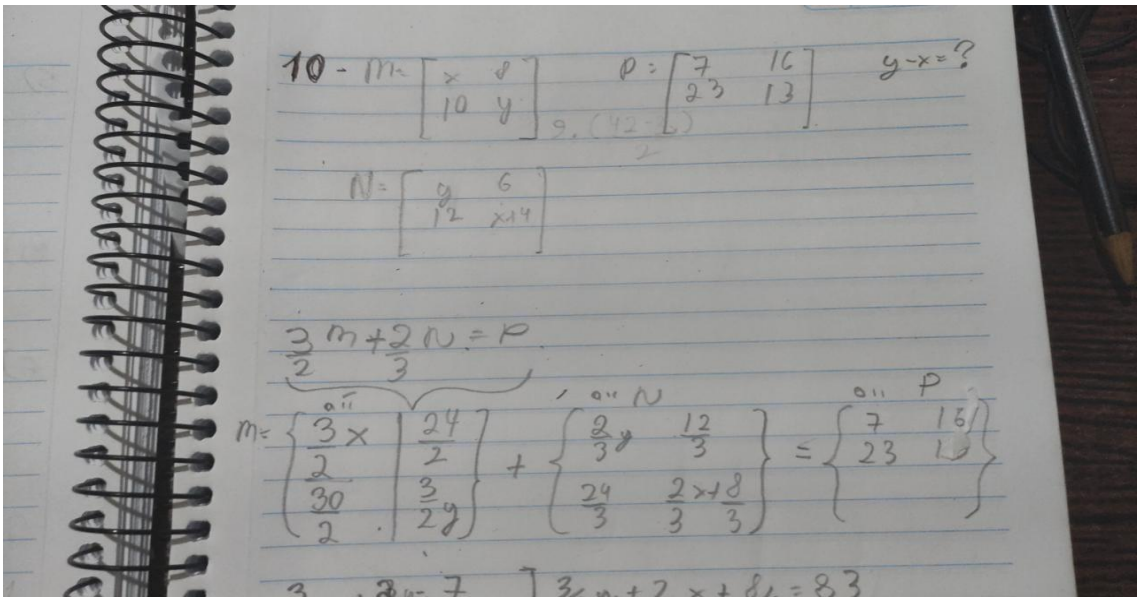
A $\begin{bmatrix} 1 & 3 \\ 3 & 1 \\ 4 & 5 \end{bmatrix}_{3\times 2}$ $a = 1+1$

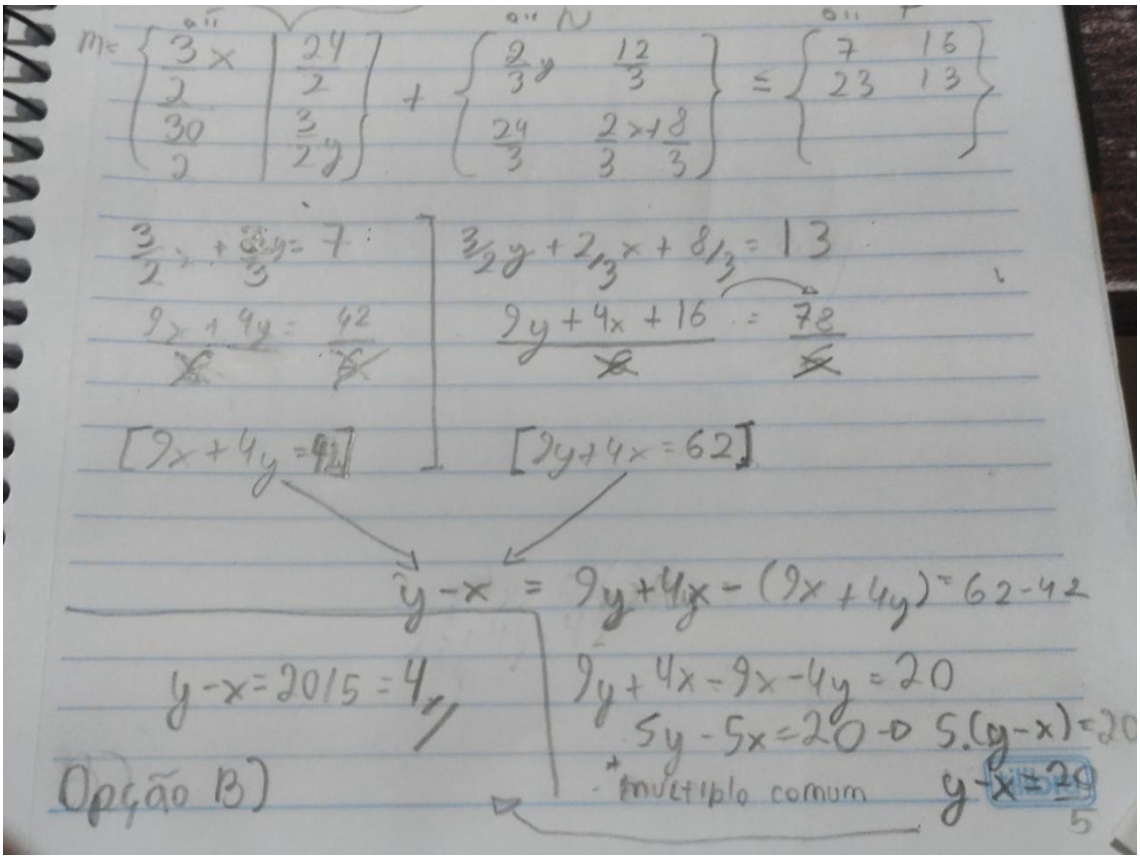
B $\begin{bmatrix} 1 & 0 \\ 0 & 2 \\ 0 & 0 \end{bmatrix}_{3\times 2}$ $b = 2 \cdot 1 - 1$

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

R: Alternativa C) $\begin{bmatrix} 2 & 3 \\ 3 & 3 \\ 4 & 5 \end{bmatrix}$

tilibra


10 - M = [x 8; 10 y] P = [7 16; 23 13] y - x = ?
N = [y 6; 12 x+4]
3/2 M + 2/3 N = P
M = {3/2 x | 24/2; 30/2 | 3/2 y} + {2/3 y 12/3; 24/3 2/3 x+8/3} = {7 16; 23 13}


3/2 x + 2/3 y = 7 | 3/2 y + 2/3 x + 8/3 = 13
9x + 4y = 42 | 9y + 4x + 16 = 78
[9x + 4y = 42] [9y + 4x = 62]
y - x = 9y + 4x - (9x + 4y) = 62 - 42
y - x = 2015 = 4
9y + 4x - 9x - 4y = 20
5y - 5x = 20 → 5.(y - x) = 20
y - x = 20/5
Opção B)
* múltiplo comum