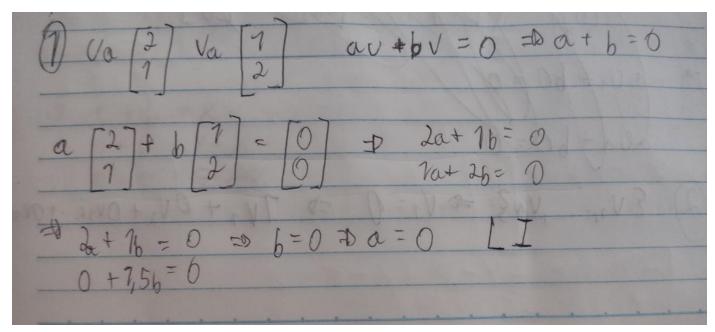
(Simon & Blume - Exercício 11.2) Determine se cada conjunto de vetores abaixo é linearmente independente.

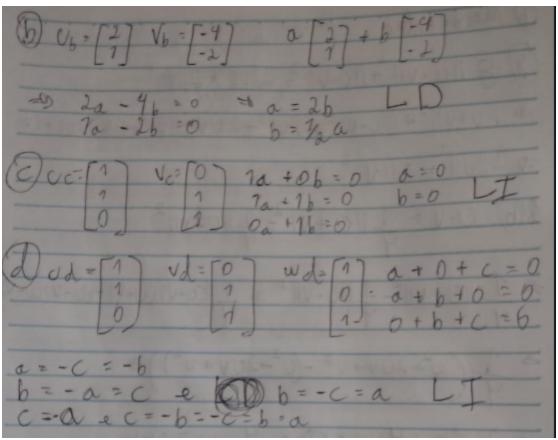
(a)
$$u_a = (2,1), v_a = (1,2)$$

(b)
$$\mathbf{u}_b = (2,1), \mathbf{v}_b = (-4,-2)$$

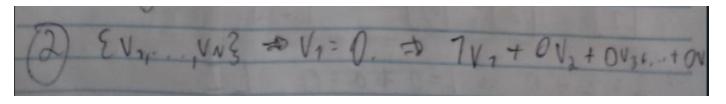
(c)
$$\mathbf{u}_c = (1, 1, 0), \mathbf{v}_c = (0, 1, 1)$$

(d)
$$\mathbf{u}_d = (1, 1, 0), \mathbf{v}_d = (0, 1, 1), \mathbf{w}_d = (1, 0, 1)$$



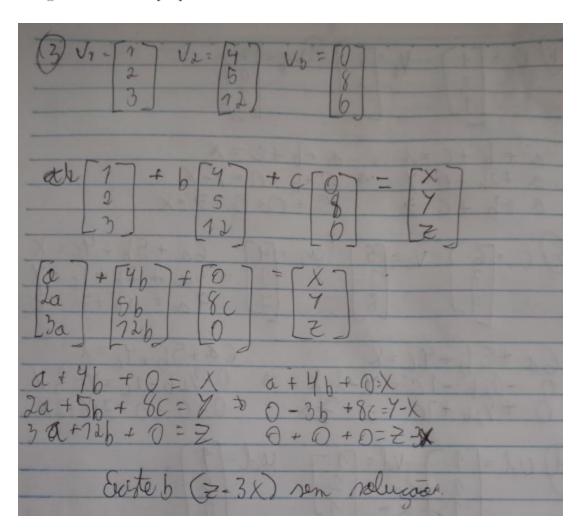


 (Simon & Blume - Exercício 11.6) Prove que qualquer coleção de vetores que inclui o vetor zero não pode ser linearmente independente.



1v1+0v2+...+0vn=0

(Simon & Blume - Exercício 11.10) Os vetores v₁ = (1, 2, 3), v₂ = (4, 5, 12) e v₃ = (0, 8, 0) geram o R³? Explique.



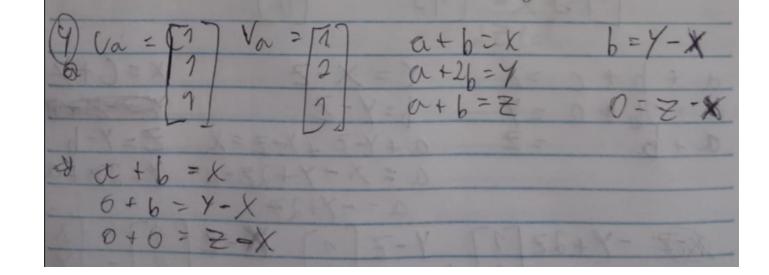
(a)
$$\boldsymbol{u}_a = (1, 1, 1), \ \boldsymbol{v}_a = (1, 2, 1)$$

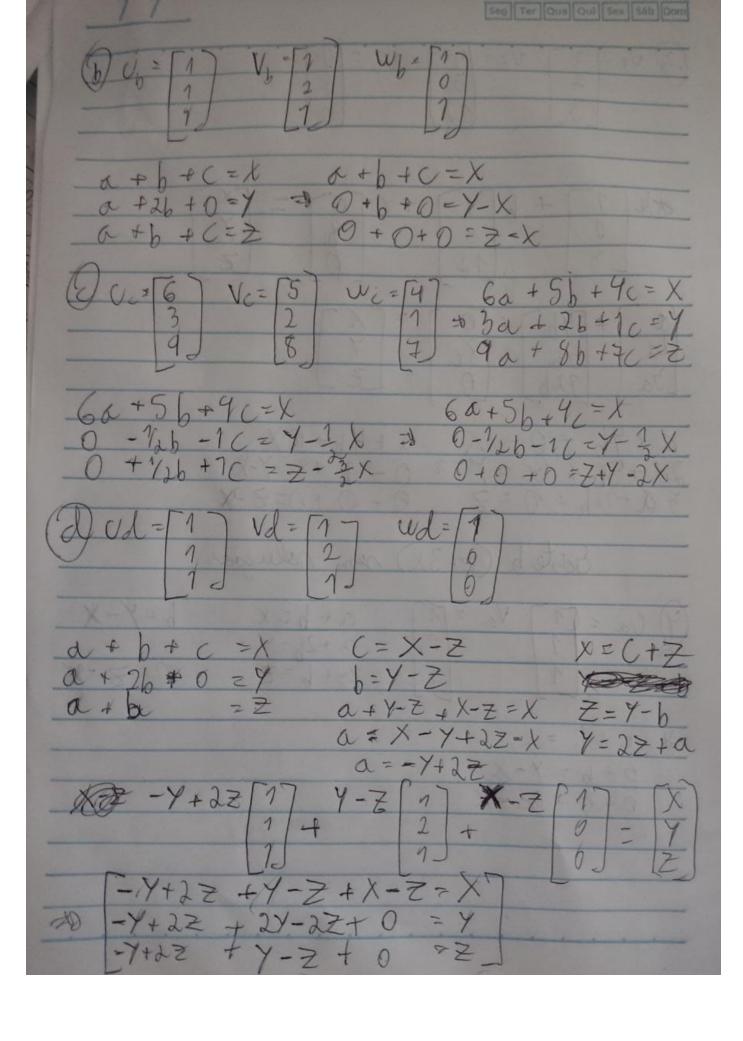
(b)
$$\mathbf{u}_b = (1, 1, 1), \mathbf{v}_b = (1, 2, 1), \mathbf{w}_b = (1, 0, 1)$$

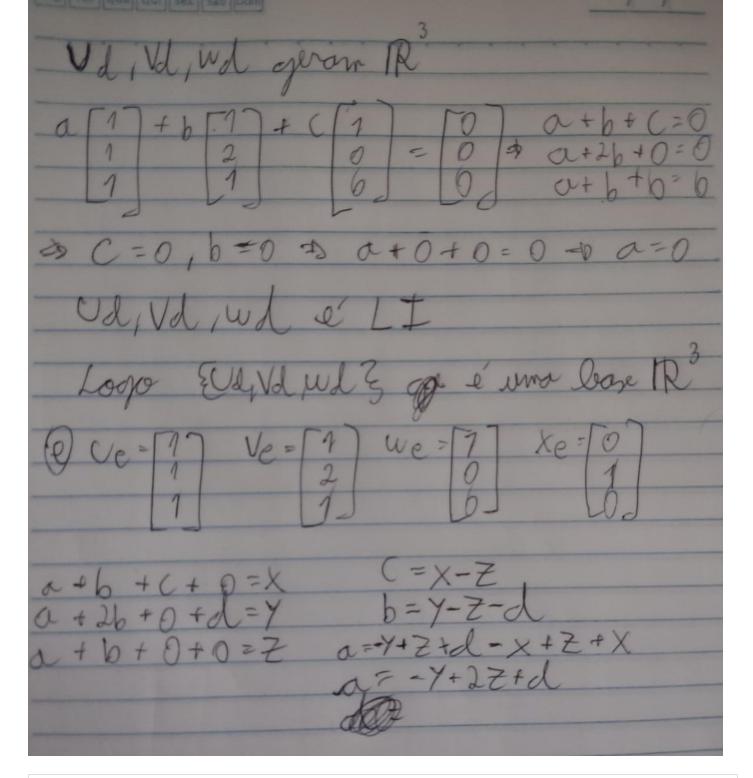
(c)
$$\mathbf{u}_c = (6, 3, 9), \mathbf{v}_c = (5, 2, 8), \mathbf{w}_c = (4, 1, 7)$$

(d)
$$\boldsymbol{u}_d = (1, 1, 1), \ \boldsymbol{v}_d = (1, 2, 1), \ \boldsymbol{w}_d = (1, 0, 0)$$

(e)
$$\mathbf{u}_e = (1, 1, 1), \mathbf{v}_e = (1, 2, 1), \mathbf{w}_e = (1, 0, 0), \mathbf{x}_e = (0, 1, 0)$$







In []: