

1. Considere as seguintes matrizes

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

calcule se for possível

- (a) $A + B$, $A + C$, $B + C$, $B - C$, $B + D$ e $B - D$
- (b) $-A$ e $2B - 3D$
- (c) AC e BC
- (d) AB e BA
- (e) BD e DB
- (f) A^2 e D^2

2. Considere as matrizes $A = \begin{bmatrix} 1 & 1 \\ 1 & 2 \\ 5 & 0 \end{bmatrix}$ e $B = \begin{bmatrix} 1 & -2 \\ 3 & 0 \end{bmatrix}$.

- (a) Calcule e $(A^T)^T$ e compare-a com A .
- (b) Calcule (AB) , $(AB)^T$, $B^T A^T$ e compare-as.