

Quiz #2

Please print your name:

Problem 1. Consider the matrices

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

- (a) Calculate AB .
- (b) Calculate BA .

Solution.

$$(a) \begin{bmatrix} 2 & 1 & 0 \\ 0 & -1 & 3 \end{bmatrix} \begin{bmatrix} 1 & 0 \\ 2 & 1 \\ 3 & -1 \end{bmatrix} = \begin{bmatrix} 4 & 1 \\ 7 & -4 \end{bmatrix}$$

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

□