

Quiz #2

Please print your name:

Problem 1. Consider the matrices

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

(a) Calculate AB .

(b) Calculate BA .

Solution.

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

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

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