Quiz #7

Directions: Carefully read each question below and answer to the best of your ability in the space provided. Your answer to problems should be written in a clear and concise manner.
You **MUST** show your work to receive full credit!

1. (5 points) Consider the matrices $A = \begin{bmatrix} 1 & 0 \\ 2 & -1 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & -2 & 1 \\ 1 & 0 & 4 \end{bmatrix}$.

   If possible, find the matrices AB and BA or explain why you can't find the particular product of matrices.

   Solution:

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

   However, we can't compute BA product of matrices A and B, since the number of columns of matrix B (equals to 3) doesn't equal to the number of rows of matrix A (equals to 2).

2. (5 points) Find the transpose of the matrix B from question 1.

   Solution:

   $$B^T = \begin{bmatrix} 3 & -2 & 1 \\ 1 & 0 & 4 \end{bmatrix}^T = \begin{bmatrix} 3 & 1 \\ -2 & 0 \\ 1 & 4 \end{bmatrix}$$

Name: _____

Section (circle one): 001 002

Question:	1	2	Total
Points:	5	5	10
Score:			