

# Math 4133 - Linear Algebra

Quiz #3 - 2014.01.23

Solutions

---

Consider the following matrices:

$$A = \begin{bmatrix} 1 & 2 \\ 8 & 0 \\ -4 & 1 \end{bmatrix}, \quad B = [ 1 \quad 0 \quad -1 ], \quad C = \begin{bmatrix} 2 \\ 1 \\ -1 \end{bmatrix}$$

Perform the following matrix multiplications. If the operation is not performable, state as much.

1.  $BA = [ 5 \quad 1 ]$ .

2.  $AC$  is not performable since  $A$  has two columns and  $C$  has three rows.

3.  $BC = 3$ .

4.  $CB = \begin{bmatrix} 2 & 0 & -2 \\ 1 & 0 & -1 \\ -1 & 0 & 1 \end{bmatrix}$ .