

Linear Algebra Quiz 1

Suppose we have three matrices

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

Compute each of the following two matrices, **if it exists**. If the matrix does not exist, briefly indicate why.

$$C(A^2 - 5B)$$

$$C^T(A^2 - 5B)$$