

Do NOT Turn In

Name

Be sure to re-read the **WRITING GUIDELINES rubric**, since it defines how your project will be graded. In particular, you may discuss this project with others but **you may not collaborate on the written exposition of the solution.**

“Obvious” is the most dangerous word in mathematics. – Eric Temple Bell

Matrix Multiplication

Do One (1) of the following.

1. If A is an $m \times n$ matrix and B is a $p \times m$ matrix and \vec{x} is a solution vector for $LS(A, \vec{0})$. Prove that the null space of A is a subset of the nullspace of BA ($N(A) \subset N(BA)$). In your write-up, be sure to designate the size of every matrix and vector.
2. Give an example of matrices A and B in which the matrix product BA makes sense and the nullspace of BA is **not** a subset of the nullspace of A .