

MATH 260, Homework 9, Fall '14
Due: October 28, 2014 at 2:20 PM
Honor Code:

Name:
Section:

- 1) (10 pts) Find the null space and the column space for the matrix $\mathbf{A} = \begin{bmatrix} 1 & 2 & 3 & 4 \\ 2 & 3 & 4 & 5 \\ 3 & 5 & 7 & 9 \end{bmatrix}$. Give the dimension of each of the two subspaces you found.

2) (10 pts) Re-do problem 1 using \mathbf{A}^T instead.

3) (5 pts) Find the sum of the dimensions of the two subspaces from problem 1, then do so again for problem 2. Note that \mathbf{A} is 3×4 . How do the dimensions of these subspaces relate to the dimensions of \mathbf{A} ?