

Name (Last, First): _____

Student ID: _____

1) Find the dimension of the subspace H inside of \mathbb{R}^4 given by all vectors of the form

$$\begin{bmatrix} 2a + 4b + c + 5d \\ a - 7b - 4c + 7d \\ -a + b + c - 4d \\ -a - b - 3d \end{bmatrix}$$

where a, b, c, d are any real numbers.

2) If A is a 9×6 matrix, what is the largest possible dimension of the row space of A ? What is the largest possible dimension of the null space $Nul(A)$?