

## Linear Algebra

### Exercises for Lecture Six: Column Space and Nullspace

Due Tuesday, October 4, 2013

For each of the following matrices, describe the column space  $C(A)$  and the nullspace  $N(A)$ .

$$A_1 = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix} \quad (1)$$

$$A_2 = \begin{pmatrix} 1 & 1 & 2 \\ 3 & 2 & 5 \\ 1 & -2 & -1 \end{pmatrix} \quad (2)$$

$$A_3 = \begin{pmatrix} 1 & 2 & 1 \\ 3 & 5 & 2 \\ 1 & -1 & -2 \end{pmatrix} \quad (3)$$

$$A_4 = \begin{pmatrix} 1 & 2 & 0 \\ 3 & 5 & 0 \\ 1 & 1 & 0 \end{pmatrix} \quad (4)$$