

Name (Last, First): _____

Student ID: _____

- (1) Let A be a 6×8 matrix. Suppose that the null space of A has a basis consisting of 3 vectors. Do the columns of A span \mathbb{R}^6 ? Justify your answer.

(2) Compute the determinant of the following matrix.

$$\begin{bmatrix} 3 & -1 & 0 & 2 \\ 4 & 9 & 2 & 0 \\ 0 & 1 & 0 & 3 \\ -1 & -2 & 0 & 2 \end{bmatrix}$$