Math 54: Quiz #3

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Name: _____

Please give neat and organized answers. Whenever applicable (especially for computational questions), make it clear what strategy you are using.

Problem 1

Let

$$A = \begin{bmatrix} 1 & -3 & -8 & -3 \\ -2 & 4 & 6 & 0 \\ 0 & 1 & 5 & 7 \end{bmatrix}.$$

Find a basis Null(A) and a basis for Col(A).

Problem 2

Let $T : \mathbb{R}^n \to \mathbb{R}^m$ be a linear transformation. Show that $\ker(T)$ is a subspace of $\mathbb{R}^n$.