

Name:

1. For each of the following statements, write the word “true” or “false.”

(a) The set $S = \{f \in C[-1, 1] \mid f(0) = 1\}$ is a subspace of $C[-1, 1]$.

(b) For any vector $\mathbf{u} \in \mathbb{R}^3$, the set $T = \{B \in M_{33} \mid B\mathbf{u} = \mathbf{0}\}$ is a subspace of M_{33} .

2. Find $NS(A)$, as a subspace of \mathbb{R}^3 .

$$A = \begin{pmatrix} -3 & -1 & -1 \\ 0 & 1 & -2 \\ 9 & 1 & 7 \end{pmatrix}$$