Math 54 Handout 7

June 25, 2018

Question 1.

True or False: The set $S = \left\{ \begin{pmatrix} s+3t \\ s-t+1 \\ t \end{pmatrix} : s,t \in \mathbb{R} \right\}$ is a vector subspace of $\mathbb{R}^3$.

Question 2.

Suppose V is a vector space. Show that the set of all linear transformations from V to $\mathbb{R}$ forms a vector space under addition of functions and scaling by constants. This is called the dual space of V, denote by V^*.