

Worksheet
9/30/2019

Let V be a vector space over a field $F = \mathbb{Q}, \mathbb{R},$ or \mathbb{C} .

1. Show that V has only one zero vector.

2. Let $v \in V$ be such that $v = -v$. Show that $v = 0$.

3. Let $c \in F, c \neq 0$ and $v \in V$ be such that $cv = 0$. Show that $v = 0$.