

Quiz 13

1. (2 points) How many conditions must a set satisfy to be a vector space?
2. (2 points) How many conditions must a set satisfy to be a subspace of a vector space?
3. (2 points) How many elements are in the set $\{x \mid -2 \leq x < 5, x \in \mathbb{Z}\}$?
4. (2 points) How many elements are in the set $\left\{ \begin{bmatrix} 2a - b \\ 4b \end{bmatrix} : a, b \in \mathbb{R} \right\}$?
5. (2 points) Is the zero vector in the set $\left\{ \begin{bmatrix} b - 3a \\ b + 1 \end{bmatrix} : a, b \in \mathbb{R} \right\}$?