

Math 466 Exercises for Week 8

April 18, 2025

1. Show that a subset $X \subseteq \mathbb{R}^n$ is discrete if and only if for every $r \in \mathbb{R}^n$, every ball centered at r contains finitely many points from X .
2. Show that if $G \leq E$ is a subgroup with $G_T = T \cap G \cong \mathbb{Z}$ then G is a discrete subgroup.
3. Classify all discrete subgroups of $Isom(\mathbb{R})$.