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## Limit set of subgroups

Let

$$G \leq O^+(1,n)(\mathbb{R}) \cong \operatorname{Isom}(\mathbb{R}\boldsymbol{H}^n) \curvearrowright \mathbb{R}\boldsymbol{H}^n$$

be a closed subgroup.

Definition.

$$\Lambda(G) := \overline{G\{x\}} \cap \partial \mathbb{R}\boldsymbol{H}^n$$

Proposition:

Let

$$G \leq O^+(1,n)(\mathbb{R}) \cong \operatorname{Isom}(\mathbb{R}\boldsymbol{H}^n) \curvearrowright \mathbb{R}\boldsymbol{H}^n$$

be a closed subgroup.

- Fixed points are in the limit set

$$\operatorname{Fix}(G) \cap \partial \mathbb{R}\boldsymbol{H}^n \subseteq \Lambda(G)$$

- The limit set is closed subset of  $\partial \mathbb{R}\boldsymbol{H}^n$ .
- The limit set is  $G$ -invariant

$$G(\Lambda(G)) = G$$

Current note has 0 direct children and 0 total descendants.

- [stem](#)
  - [O+ R1 n](#)
    - [Subgroups of  \$O^+\(1,n\)\(\mathbb{R}\)\$](#) 
      - [Limit set of subgroups](#)

And it has 1 siblings.

- [stem](#)
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