



Math for the people, by the people.

stabilizer

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Synonym	isotropy subgroup

Let G be a group, X a set, and $\cdot : G \times X \longrightarrow X$ a group action. For any subset S of X , the *stabilizer* of S , denoted $\text{Stab}(S)$, is the subgroup

$$\text{Stab}(S) := \{g \in G \mid g \cdot s \in S \text{ for all } s \in S\}.$$

The stabilizer of a single point x in X is often denoted G_x .