

Isotropy group

Let  $G$  be a group and  $S$  be a  $G$ -set. For an element  $s \in S$ , the set

$$G_s := \{x \in G : xs = s\}$$

is a subgroup of  $G$ . It is called the isotropy group of  $s$ . It is also known as the stabilizer group.

If  $S$  is a transitive  $G$ -set and  $s \in S$  is any fixed element, then

$$G/G_s \rightarrow S$$

is an invertible  $G$ -map.