

# Group

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## Table of contents

**Definition 0.1.** A group is a non-empty set  $\Gamma$  together with a binary operation on  $\Gamma$ , denoted " $\cdot$ ", that combines any two elements  $\gamma$  and  $\gamma'$  of  $\Gamma$  to form an element of  $\Gamma$ , denoted  $\gamma \cdot \gamma'$ , such that the following three requirements, known as **group axioms**, are satisfied:

- 1.
- 2.
- 3.