

Math 71: Abstract Algebra

Lecturer: **Professor Asher Auel**

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1 Introduction to Groups

1.1 Basic Axioms

Definition 1 (Binary Operation)

A **binary operation** on a set S is a function $*$: $S \times S \rightarrow S$ that assigns to each ordered pair (a, b) of elements in S a unique element $a * b$ in S . We say that S is **closed** under the operation $*$.

A binary operation could have multiple