## Math 6020, Graduate Algebra, Fall 2024, Homework 0 Instructor: Danny Krashen

Discussing the problems with other people is encouraged, but you must write up your own work independently!

This is just a practice homework assignment to make sure we all can properly use the gradescope system!

- 1. Which do you prefer:
  - 1. groups
  - 2. rings
  - 3. fields
  - 4. groupoids
  - 5. categories
  - 6. something else (specify)
  - 7. refuse to answer this question
- 2. Show that if G and H are groups and if  $f: G \to H$  is a map of sets such that f(ab) = f(a)f(b) for every  $a, b \in G$ , then we also have f(e) = e where e denotes the identity element(s) of G and H respectively.