

# MATH 5301 Elementary Analysis - Midterm Exam

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## Problem 1

**Problem:** 100 soldiers stayed in a rank in front of the corporal. The corporal ordered all of them to turn left, but the soldiers were newbies, so they were not certain was it left from their perspective or from the corporal's point of view. So, some of them turned left and some turned right. After that at every second if two neighboring soldiers find themselves facing each other, they rotate by 180 degrees. Show that this process will not last forever.

## Problem Formulation