ANTON MOSUNOV, University of Waterloo

Problem Solving Sessions and Presentation of Proofs In Advanced Algebra Class

In Fall 2022 I taught a first-year Advanced Algebra course aimed at developing students' abilities to read, write and discover proofs. Understanding that collaboration and communication are among the top skills of any practicing mathematician, I organized my lectures so that each class had a group problem solving session, followed by a presentation of solutions to given problems to the entire class. In this talk I intend to outline the details of implementation of this course (semi-flipped classroom model, group assignments using Coq proof assistant, etc), reflect on course components that proved to be most beneficial for student learning, and discuss improvements that could be introduced in the future.