

Do Leron's structured proofs improve proof comprehension?

Preliminary Research Report

Abstract

In undergraduate mathematics courses, proofs are regularly employed to convey mathematics to students. However, research has shown that students find proofs to be difficult to comprehend. Some mathematicians and mathematics educators attribute this confusion to the formal and linear style in which proofs are generally written. To address this difficulty, Leron (1983) suggested an alternative format for presenting proofs, named *structured proofs*, designed to enable students to perceive the main ideas of the proof without getting lost in its logical details. However, we are not aware of any empirical evidence that such format actually helps students comprehend proofs. In this presentation we report preliminary results of a study that employs a recent model of proof comprehension to assess the extent to which Leron's format help students comprehend proofs.

Keywords: proof comprehension, structured proofs, proof reading.