

GEOGEBRA WITH AN INTERACTIVE HELP SYSTEM GENERATES ABDUCTIVE ARGUMENTATION DURING THE PROVING PROCESS

Nguyễn Danh Nam

TÓM TẮT:

In this paper the author provides a pedagogical intervention using GeoGebra in the proving process. This intervention may bridge the gap between argumentation and proof, especially the difficulty in transitioning from abductive argumentation to deductive proof. Heuristic questions and explorative tasks in an interactive help system are responsible for sowing the seeds of realizing geometric invariants and generating the ideas for proofs. In order to explain some 'observed facts' in GeoGebra, students need to make some conjectures and then find data for validating the produced conjectures. These activities provide students with an opportunity to generate abductive argumentation aimed at writing proofs.