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Limits and infinity – a study of university students' performance revisited.

Grevholm, Barbro (ed.) et al., Nordic research in didactics of mathematics: past, present and future. Oslo: Cappelen Damm Akademisk (ISBN 978-82-02-39348-9/pbk). 282-298 (2013).

Summary: Students' work with limits of functions includes the concept of infinity. These concepts are complex but necessary for mathematics studies. A study of student solutions to limit tasks was conducted to reveal how students handled limits of functions and infinity at a Swedish university. As a background to the students' and teachers' situations we have also analysed textbooks and curricula. One result is that many students were unable to handle limits correctly. Some students gave correct answers with incorrect explanations to tasks. Textbooks used at upper secondary schools do not provide much theory or tasks about limits and infinity, so most students new to university do not have a well developed image of these concepts.

Classification: I25 D34 D35 U24 D75

Keywords: limits of functions; infinity; university students; curricula; textbooks