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Designing tasks for conjecturing and proving in number theory.

Nicol, Cynthia (ed.) et al., Proceedings of the 38th conference of the International Group for the Psychology of Mathematics Education “Mathematics education at the edge”, PME 38 held jointly with the 36th conference of PME-NA, Vancouver, Canada, July 15–20, 2014, Vol. 5. [s. 1.]: International Group for the Psychology of Mathematics Education (ISBN 978-0-86491-360-9/set; 978-0-86491-365-4/v.5). 257-264 (2014).

Summary: The purpose of this study is to develop design principles for crafting tasks that will encourage conjecturing and proving in the context of elementary number theory at the undergraduate level. From the analyses of the written work of 46 prospective mathematics teachers on a task designed according to these principles, we think that there is potential to build on and refine from these principles for other undergraduate mathematics courses.

Classification: F69 D59 E59

Keywords: elementary number theory; task design; problem posing; conjecturing; proving