

How Students Come to Understand the Domain and Range for the Graphs of Functions

Peter Cho, Richard Stockton College
Deborah Moore-Russo, University at Buffalo

Abstract

To understand the mathematical concept of function, students must understand certain sub-concepts, such as domain and range. Little is known about how students come to understand the domain and range for the graphs of functions. In this study, we identified the common strategies, transitional conceptions with common strategic errors, and representational challenges evidenced by community college students during tasks involving the graphs of functions. Data from the students' responses to tasks and subsequent interviews are reported.



Peter Cho (young.cho@stockton.edu) is an assistant professor in the School of General Studies at the Richard Stockton College of New Jersey where he teaches developmental mathematics courses. He has taught many undergraduate-level mathematics courses at the College of Coastal Georgia, GA, and at Rowan-Cabarrus Community College, NC.

Deborah Moore-Russo (dam29@buffalo.edu) is an associate professor in the department of Learning and Instruction at the University at Buffalo where she teaches graduate-level mathematics education courses. She serves as the director of Curriculum, Instruction, and the Science of Learning doctoral program as well as the Gifted Mathematics program. Her primary research interest is in spatial literacy.

