Establishing and justifying algebraic generalization at the sixth grade level.


Summary: This is a case study of two sixth graders performing a generalization involving a linear pattern that was presented in a pre- and post-interview. The basic research question was: How do sixth graders acquire the ability to establish and justify generalizations in algebra? We discuss characteristics of students who are predominantly figural in their strategies and claim that figural ability and fluency in representations and variable use are essential for success.

Classification: E43 H23

Keywords: elementary algebra; generalizing; cognitive processes; problem-solving strategies; grade 6; educational research