

1033-97-183

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Assessing with Multiple-Choice questions has been a long-standing practice in mathematics classrooms at all grade levels. However, multiple-choice questions have not always revealed what mathematics learners actually know and how well they know it. The NAEP Assessment has employed extended-multiple-choice (E-MC) items that require learners to go beyond simply choosing one correct choice to indicating the degree to which they think other choices are incorrect. This session will allow participants to investigate the E-MC question format, and explore how it can provide insights into the thinking of their students and how it can inform their instruction. It is designed for mathematics educators, preservice teachers, and instructors of undergraduate mathematics. The session will be followed by a workshop in which participants will examine numerous NAEP items from five different content strands and the corresponding data on student performance. The workshop intends to inform participants on when and how to best use multiple-choice assessments in the mathematics classroom. (Received September 10, 2007)