

1014-C1-1711 **Lidia Dobria*** (LDobria@hotmail.com), 4300 N. Narragansett Ave., Chicago, IL 60656.
Measuring Student Competency at the Completion of Mathematics Developmental Courses.

Upon completion of a developmental mathematics course students are expected to demonstrate a level of understanding and knowledge that will ensure their adequate performance in subsequent courses. This study analyzed the performance of 653 students on a multiple-choice exit test taken at the end of a Fundamentals of Intermediate Algebra & Geometry course. The one parameter logistic (Rasch) model was used to analyze the data and create a common frame of reference on which student ability measures and item difficulty calibrations were mapped. Test reliability and validity were adequate. Distractor analysis detected several poorly performing items and topics students did not understand well. The difficulty of the test items was found to be below the ability of most students. Fit statistics detected several unusual student response patterns (potential cheating or guessing), and also a few poorly written and overexposed items. Course instructors have used these results to revise the exit test, to redefine the passing criteria in terms of item content rather than percentage correct, and to identify strategies that can be employed to raise the competency levels of under-achieving students. (Received September 28, 2005)