Abstract

Title: Developing and Piloting an Assessment Plan for Measuring Student Understanding in the Calculus Sequence

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This is a pilot study which seeks to develop a process for assessing a subset of the recently revised student learning goals of the Department of Mathematics. Focusing on the calculus sequence, the first objective of the study is to develop and implement an effective instrument to assess mastery of the targeted student learning goals. This instrument will measure students’ ability to perform basic computations, explain the concepts behind the computations, interpret the results of the computations, and utilize the computation in practical applications of the skills. This study assesses student learning by analyzing quantitative and qualitative data obtained from results on a standardized placement test, and from various instruments administered throughout the calculus sequence. The second objective of the pilot study is to use the information gathered from the implementation of the calculus assessment to develop an effective assessment plan for courses across the Mathematics Program curriculum.