

1077-N1-2747 **Paula Shorter*** (paula.shorter@rockhurst.edu), 1100 Rockhurst Road, Kansas City, MO 64110, and **Mairead Greene** (mairead.greene@rockhurst.edu). *A First Attempt at Categorizing and Assessing Different Levels of Student Understanding*. Preliminary report.

As part of writing active-learning, inquiry-based course activities for several of our math courses (including precalculus, calculus, and differential equations), we have begun investigating exactly what it is that we are assessing on exams. We realized that when students successfully complete a given exam question, they may be demonstrating different types or levels of understanding. For example, they may be implementing skills, they may be adapting and applying a previously developed method, and/or they may be reasoning directly from their understanding of the meaning of a concept. Each of these examples of understanding is important and being able to distinguish them and assess them individually helps us better understand the learning taking place in our classrooms. To investigate this, we have developed a weighting system that categorizes the different levels of understanding being assessed in an exam question. We have also surveyed our students for their thoughts on the types of mathematical thinking that they actually engaged in while answering these same exam questions. In this talk, we will describe the weighting system that we developed, the survey we gave our students, and the results from comparing our categorization of questions and the student feedback. (Received September 22, 2011)