The use of multiple choice questions is becoming more widespread in recent years as an assessment tool in Calculus; with the introduction of online homework systems in mathematics such as MyMathLab and WebAssign, it is becoming increasingly common for instructors to use multiple choice or short answer questions to assess student understanding on homework assignments. Motivated by the question of whether or not it is appropriate to use multiple choice questions on quizzes and exams in Calculus, we conducted a study to investigate the impact of multiple choice questions versus open response questions on student understanding. In this talk we will discuss initial observations of this study. (Received September 14, 2011)