Many institutions use a test of mathematical knowledge and skills to determine, at least in part, course placement. However, when the success of such a placement test is evaluated, the most common measure is students’ final grades in the course. I will argue that final course grade is not an appropriate outcomes measure for student placement based on a knowledge and skills based test, and will present alternative outcomes measures. Preliminary results from a study of a proposed Calculus Readiness Test will also be presented. (Received September 16, 2008)