Mastery-based assessment differs from traditional exams by only granting credit for a problem if its solution is completely correct. Otherwise the student can retry a similar version, up to a finite amount of attempts. In spring 2016 semester, I used mastery-based assessment in a precalculus course, a course many students at Spring Hill College struggle in due partly to its abundance of information. Throughout the semester I collected the result of each attempt students took for each problem. Using this data, I will discuss how one can measure student improvement and discuss other aspects of improvement I observed. Final exam grades are also compared with previous semesters using traditional exams. (Received September 19, 2016)