Abstract: Homework is one of students’ opportunities to interact with mathematics content, and hence doing homework may influence students’ beliefs about mathematics and their own ability to do mathematics. We hypothesize that giving students unlimited tries in online homework could increase their confidence in their ability to do mathematics, and lower anxiety they might feel about doing mathematics. We will present an under-construction study design aimed to explore changes in students’ beliefs about mathematics and their ability to do mathematics. Specifically, we wish to explore such changes as related to having unlimited attempts on online homework problems.