Math 199, Fall 2023
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Preparation assignment 1 - Continuity

Estimated time: 15-30 minutes.

Point value: 2 points.

Goals: Reflect on the definition and the idea behind continuity. Reminder: Prep assignments in this class are neither meant to be worksheets nor homework. The goal of these assignments is for you to spend some time thinking about the subject matter we will talk about in class.

Take out a separate sheet of paper, and write responses to the following questions.

1) Write down your own best definition and explanation of what it means for a function to be continuous. Try not to directly refer to things you might've learned in a math class.

2) Write down the definition of what it means for a function to be continuous that you learned in class (or from the book, or from the internet).

3) State the intermediate value theorem. Try to make sure you get the conditions and details correct; you can use the book/internet for this.

4) Does your answer to (1) look closer to (2) or (3)?

5) *Bonus:* Can you think of a function f which is not continuous on an interval $[a, b]$ but which still satisfies the intermediate value theorem there?