Math 150 Section 01 and 02
Daily Comprehension Assignment

Section 2.4

1. Know the definitions of the following terms and.

   (a) continuous at \( x = a \)
   (b) discontinuous at \( x = a \)
   (c) removable discontinuity
   (d) jump discontinuity
   (e) infinite discontinuity
   (f) continuous on an interval
   (g) continuous from the right at \( x = a \)
   (h) continuous from the left at \( x = a \)

2. What does the Intermediate Value Theorem say?

3. Write answers to the following questions in your notebook. (Due Wed Sept 25)

   (a) Draw a function with domain \((-5, 5)\) with a jump discontinuity at \( x = -1 \), an
       infinite discontinuity at \( x = 1 \), a removable discontinuity at \( x = 2 \) and continuous
       elsewhere.
   (b) Give an example of a function defined on \((-2, 3)\) where \( f(-2) = -2 \) and \( f(3) = 5 \)
       but \( f(x) \neq 0 \) for any \( x \) in \((-2, 3)\). Does this contradict the Intermediate Value
       Theorem?

Homework

   (a) WebAssign Problems: See WebAssign HW4
   (b) Hand-Written Problems to turn in: 2.4: 2, 6, 35 (Due Wednesday Oct 2)