

NAME: \_\_\_\_\_

YOUR GRADE IS BASED ON THE PROCESS AS WELL AS THE FINAL RESULT. SHOW ALL YOUR STEPS CLEARLY SO YOU WILL BE ELIGIBLE FOR THE MOST PARTIAL CREDIT. YOU MAY USE A CALCULATOR, BUT NO NOTES, BOOKS, OR OTHER STUDENTS. GOOD LUCK!

1.) (5 pts.) Although  $f(x) = 1/x$  is continuous on  $(0, 1]$ , it has no maximum value on this interval. Why doesn't this contradict the EVT?

2.) (5 pts.) In the graph below, let the endpoints of the curve have coordinates  $(a, f(a))$  and  $(b, f(b))$ . Draw the two slopes described in the conclusion of the MVT. (In other words: after the "Then" in the MVT, there is an equation, each side of which represents a slope relating to the graph of  $f(x)$  on  $[a, b]$ . For the graph shown, sketch these two slopes.)

