MATH 150A-QUIZ 7, WINTER 2020

Name: _____

1. (5pts) Construct a $f : I \to \mathbb{R}$ so that $|f(x)|$ is continuous on I while $f(x)$ is discontinuous at some $\xi \in I$. Is it possible that f is continuous on I while $|f(x)|$ is discotinuous at some $\xi \in I$? Why?

2. (5pts) Construct a continuous function $f : I \to \mathbb{R}$ on a bounded interval I with the following property: f is bounded on I and has a minimum. But f has no maximum on I. In this case, it possible that I is also a closed interval? Why?