Talks 3 Math 456 Fall 2024

1) **Maps with bounded derivative.** Suppose

$$f : [0, 1] \longrightarrow [0, 1]$$

is differentiable and that $|f'| \leq 1$ on $[0, 1]$.

   a) Show that the set of fixed points is non-empty and connected—that is, either a point or an interval.
   b) Show that every periodic point has period one or two.

2) ***Chaos*: 3.11** (p. 141)
3) ***Chaos*: 3.12** (p. 141)
4) ***Chaos*: 3.13** (p. 141)
5) ***Chaos*: 3.15** (p. 142)
6) ***Chaos*: 3.16** (p. 142)