Homework 1: Period Three Implies Chaos

Homework Problems.

Pick **one** of the following problems to solve!

1. Find a function with a point of period 5, but no point of period 3. Or prove such a crazy thing cannot exist.

2. Find a function with points of every even order, but no odd order. Or prove such a crazy thing cannot exist.

3. (a) Prove or disprove: at any point in time, there are two points on the earth that are (1) on opposite ends of the earth and (2) the same temperature.

   (b) Prove or disprove: at any point in time, there are two points on the earth that are (1) on opposite ends of the earth and (2) the same temperature and (3) have the same smog density.

4. Alternately: go and read about period three and chaos, come up with something clever, work on it here.