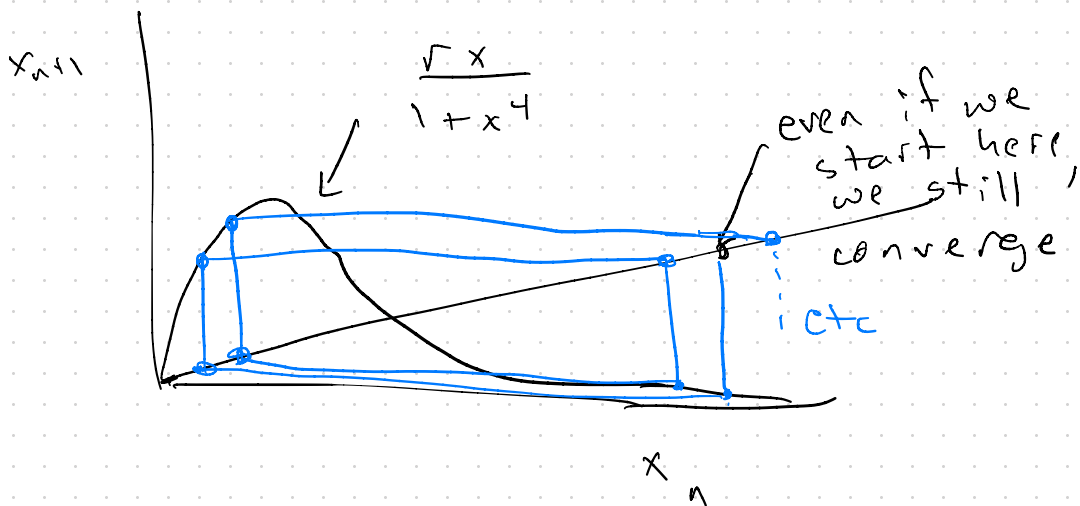6c   Discussion!

6b had a stable fixed pt for
   all values of r.

6c exhibits period doubling
   chaotic dynamics, and
   regions of stability. It
   does so over $r \to \infty$,
   as opposed to the limit
   of $r = 4$ for the logistic
   map. This is because the
   fcn $f(x_n) = \dfrac{r x_n}{1 + x_n^4}$ is
   positive for all x_n, meaning
   the cobweb diagram will
   always converge

x_{n+1}

$$\frac{\sqrt{x}}{1+x^4}$$

even if we start here, we still converge

CtC

x_n

Speculation about self-similarity (or evidence thereof) also relevant. I have not computed feigenbaum's constant for this map, but comments related to feigenbaum are also worth points.