(1) Below I have given three different logistic maps with their graphs. For each, do the following:
- Find all fixed points
- Determine stability of fixed points (as well as you can)
- Start with $x_0 = 0.35$, and use a calculator to compute a bunch of iterations. (Keep going until you see enough of the pattern...)
- As carefully as you can, draw the orbit for $x_0 = 0.35$ based on the computations you did previously. Perhaps use another paper or book or pen to make your lines as straight as possible.
- Discuss what you observe.
- (Come back to this at the end) If time, try other initial conditions. If a sink exists, what is its basin?
(a) $g_{0.9}(x) = 0.9x(1 - x)$
(b) \( g_2(x) = 2x(1 - x) \)

(c) \( g_{3.4}(x) = 3.4x(1 - x) \)
(2) Consider the map \( f(x) = \frac{3x-x^3}{2} \). Solve the inequality \( |f(x)| > |x| \). What happens to orbits whose initial conditions satisfy the inequality? What happens to orbits that do not? What does this tell you about stability of the fixed point \( x = 0 \)? What does it imply about the fixed point \( x = 1 \)? What happens to orbits whose initial conditions are sufficiently large? Illustrate this with cobweb drawings on the following plots (they are the same map, with different axis scales).