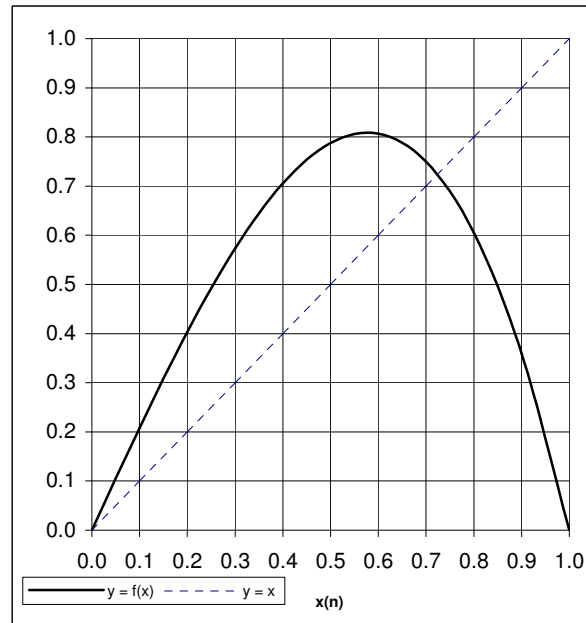


$$x(n+1) = bx(n)[1 - x(n)^2]$$

$$b = 2.1 \quad x^* = 0.723747$$

n	x(n)	f(x(n))	x	y = f(x)
0	0.10	0.21	0.00	0.00
1	0.21	0.42	0.10	0.21
2	0.42	0.72	0.20	0.40
3	0.72	0.72	0.30	0.57
4	0.72	0.72	0.40	0.71
5	0.72	0.72	0.50	0.79
6	0.72	0.72	0.60	0.81
7	0.72	0.72	0.70	0.75
8	0.72	0.72	0.80	0.60
9	0.72	0.72	0.90	0.36
10	0.72	0.73	1.00	0.00
11	0.73	0.72		
12	0.72	0.73		
13	0.73	0.72		
14	0.72	0.73		
15	0.73	0.72		
16	0.72	0.73		
17	0.73	0.72		
18	0.72	0.73		
19	0.73	0.71		
20	0.71	0.73		
21	0.73	0.71		
22	0.71	0.74		
23	0.74	0.70		
24	0.70	0.74		
25	0.74	0.70		
26	0.70	0.75		
27	0.75	0.68		
28	0.68	0.76		
29	0.76	0.67		
30	0.67	0.78		
31	0.78	0.65		
32	0.65	0.79		
33	0.79	0.62		
34	0.62	0.80		
35	0.80	0.60		
36	0.60	0.81		
37	0.81	0.59		
38	0.59	0.81		
39	0.81	0.59		



$$f(x) = bx(1 - x^2) = bx - bx^3$$

$$f'(x) = b - 3bx^2$$

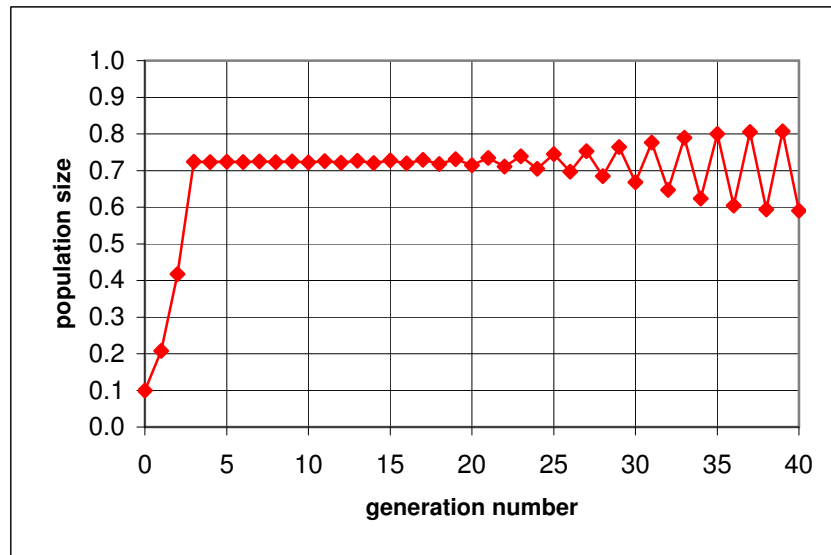
$$f(x) = x \text{ if } x = x^* = \sqrt{(b-1)/b}$$

$$f'(x) = 0 \text{ if } x = \sqrt{1/3}$$

$$f(\sqrt{1/3}) = (2/3)b\sqrt{1/3} ; \text{ a max}$$

$$f(\sqrt{1/3}) \leq 1 \text{ if } b \leq [3\sqrt{3}]/2 \approx 2.598$$

$$f'(0) = b$$



40

0.59

0.81