

Jacob Melrose

HW2

1.

1	1						
1	2	1					
1	3	3	1				
1	4	6	4	1			
1	5	10	10	5	1		
1	6	15	20	15	6	1	
1	7	21	35	35	21	7	1

2. $x_{n+1} = a \cdot x_n(1-x_n)$

if $a=1$, converges to $\frac{1}{2}$

$a=2 \rightarrow 1$

$a=3 \rightarrow 1$

$a=3.5 \rightarrow 1.5$

(3) The Feigenbaum constant is a mathematical constant that appears in a bifurcation diagram for a non-linear map.