

$$\frac{9}{c}$$

$$g(x) = 2x - 2x^2$$

$$g'(x) = x - 4x$$

$$g'(\frac{1}{2}) = \frac{1}{2} - 4 \cdot \frac{1}{2}$$

$$= \frac{1}{2} - \frac{4}{2}$$

$$= -3/2 = c$$

$c < 1 \rightarrow$  LINEAR  
CONVERGENCE