

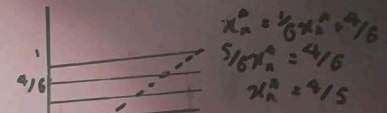
	P1	
	A	B
A	(2, 0)	(-3, 1)
B	(4, 2)	(-5, -4)

$$\left. \begin{aligned} 2p - 3(1-p) &= 4p - 5(1-p) \\ 0p + 2(1-p) &= 1p - 4(1-p) \end{aligned} \right\} \Rightarrow x_n = 6x_{n-1}$$

$$\begin{aligned} 2p &= 2(1-p) \\ \Rightarrow 2p &= 2 - 2p \Rightarrow p = 1/2 \end{aligned}$$

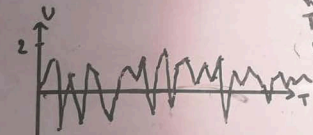
$$\text{and } p = 6(1-p) \Rightarrow p = 6 - 6p \Rightarrow p = 6/7$$

Let  $p = x_n$ ,  $\rightarrow$  Logistic Map:  $x_{n+1} = \frac{1}{6}x_n \pmod{1}$   
 $(1-p) = x_{n+1}$

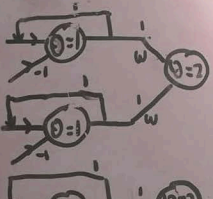


Utility for P2  $\Rightarrow 2(1 - \frac{6}{7}) = \frac{2}{7}$

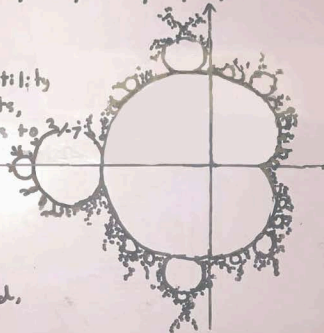
where  $V$  = utility  
 $T$  = attempts  
 $V$  converges to  $2/7$  as  $P_2$  tends



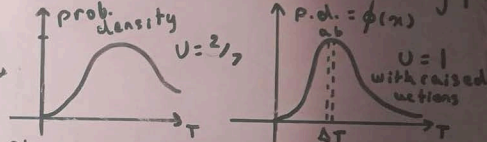
Average utility of 200 different players per attempt.



When multilayered,  
 $w_{kt}^k = w_{kt}^k + \Delta w_{kt}^k$   
 $\Delta w_{kt}^k = -C \frac{\partial E}{\partial w_{kt}^k}$   
 $f(s) = \frac{a}{1 + e^{-\beta s + \gamma + \lambda}}$



Therefore, when P2 actions  $x(1 + \frac{5}{6}) = 183.3\%$ ,  $x_n^* = p = \frac{4}{5}$  gives STABLE ATTRACTOR utility of 1.



Players settle for strategy equilibrium sooner if actions are raised to stable outcome level.

If  $\Delta T \leq E$ ,  $\Delta T = \int_a^b \phi^*(T, t) \phi(T, t) dT$   
 $\text{Flux} = j(x) = \frac{1}{2m} [(\hat{p}\phi)^* \phi + \phi^* (\hat{p}\phi)]$  and for  $P(a \leq \Delta T \leq b)$ ,  
 $\phi = Ae^{iK\Delta T}$ , with  $\hat{p} = -ik \frac{d}{dT}$ ,  $j(x) = \frac{\hbar}{m} A^* A$ .

$\rightarrow$  Neuron resonant amplitude output  $T_r = \left| \frac{F}{\lambda} \right|^2$   $T_r \uparrow$  STABILITY