Dudas horario atención

Thursday, April 16, 2020 8:35 AM

$\boxed{\begin{array}{l} EN = (100,100) \checkmark \\ EN = (101,101) \checkmark \end{array}}$ d

$100 = cmg$

$$MR_A(P_B) = \begin{cases} [P_B+1,\infty)\in\mathbb{N} & P_B < 100 \\ [100,\infty)\in\mathbb{N} & P_B = 100 \\ 101 & P_B = 101 \\ P_B - 1 & 101 < P_B < 550 \\ 550 & P_B > 550 \end{cases}$$

$\Pi_m = (1000-P)P - (100)(1000-P)$

$\frac{\partial \Pi_m}{\partial P} = 1000 - 2P + 100 = 0$

$1100 = 2P$

$\boxed{550 = p_m}$

a) $2 \gg 1$

b) $P_m \succ_{\text{Betrand}} P \in [551,\infty) \in \mathbb{N}$

$100 \succ_{\text{Betrand}} (1,99]$

2017 - NOV

(1) $V_i = \frac{1}{n}\sum_{j=1}^{N} e_j - \frac{e_i^2}{2}$

a) $\boxed{\frac{\partial V_i}{\partial e_i} = \frac{1}{n} - e_i = 0 \Rightarrow e_i^* = \frac{1}{n}}$

$EN = \left(\frac{1}{n}, \frac{1}{n}, \dots, \frac{1}{n}\right)$

b) $\sum_{j=1}^{n} e_j = \sum_{j=1}^{n}\left(\frac{1}{n}\right) = n \cdot \frac{1}{n} = 1$

c) $\max_{e_1,\dots,e_n} U_1 = \frac{1}{n}\sum_{j=1}^{n} e_j - \frac{e_1^2}{2}$ s.a $U_2 = \frac{1}{n}\sum_{j=1}^{n} e_j - \frac{e_2^2}{2} \geq \overline{U_2}$

$\vdots$

$U_n = \frac{1}{n}\sum_{j=1}^{n} e_j - \frac{e_n^2}{2} \geq \overline{U_n}$

d) CPO

e_1: $\frac{1}{n} - e_1 + \lambda_2\left(\frac{1}{n}\right) + \lambda_3\left(\frac{1}{n}\right) + \dots + \lambda_n\left(\frac{1}{n}\right) = 0$

$\frac{1}{n}(1+\lambda_2+\lambda_3+\dots+\lambda_n) = e_1$

e_2: $\frac{1}{n} + \lambda_2\left(\frac{1}{n} - e_2\right) + \lambda_3\left(\frac{1}{n}\right) + \dots + \lambda_n\left(\frac{1}{n}\right) = 0$

$\frac{1}{n}(1+\lambda_2+\dots+\lambda_n) = e_2\lambda_2$

$\frac{1}{\lambda_2 n}(1+\lambda_2+\dots+\lambda_n) = e_2$

e_3: $\frac{1}{\lambda_3 n}(1+\lambda_2+\dots+\lambda_n) = e_3$

$\vdots$

$e_n = \frac{1}{\lambda_n n}(1+\dots+\lambda_n) = e_n$

$e_1 = e_2 = e_3 \dots = e_n$

$\frac{1}{n}(1+\cancel{\lambda_2+\dots+\lambda_n}) = \frac{1}{\lambda_2 n}(\cancel{1+\dots+\lambda_n})$

$\lambda_2 = 1 \Rightarrow \lambda_3 = 1 \rightarrow \lambda_4 = 1 \dots \rightarrow \lambda_n = 1$

$e_1 = \frac{1}{n}\Big(\underbrace{1 + \frac{\lambda_2}{1} + \dots + \frac{\lambda_n}{1}}_{n}\Big) = e_1 = \frac{1}{n}(n) = \boxed{1 = e^*}$

(e) $\boxed{n=2}$

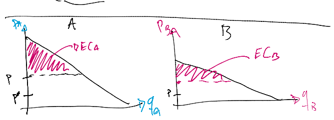
$\frac{1}{n}$ es ESTRICTAMENTE DOMINANTE

$EN = (S_1^*, \dots, S_n^*)$

$MR_1(S_{-1}^*) \qquad MR_n(S_{-n}^*)$

$MR(S_1,\dots,S_n) = (MR_1(S_{-1}), MR_2(S_{-2}), \dots, MR_n(S_{-n}))$

$\rightarrow MR(S_1^*,\dots,S_n^*) = (S_1^*, S_2^*, \dots, S_n^*)$



$\underline{\Pi} = Q(P)P - CT(Q)$

(2) $U_A = \frac{1}{2}\sqrt{kl} - \frac{l^2}{4}$

$U_B = \frac{1}{2}\sqrt{kl} - k/4$

a) $J = \{A, B\}$

$S_A = \{l \in [0,\infty)\}$

$S_B = \{k \in [0,\infty)\}$

U

(b) $\frac{\partial U_A}{\partial l} = \frac{1}{4}\frac{K^{1/2}}{l^{1/2}} - \frac{l}{2} = 0 \Rightarrow \frac{1}{2}\frac{K^{1/2}}{l^{1/2}} = l$

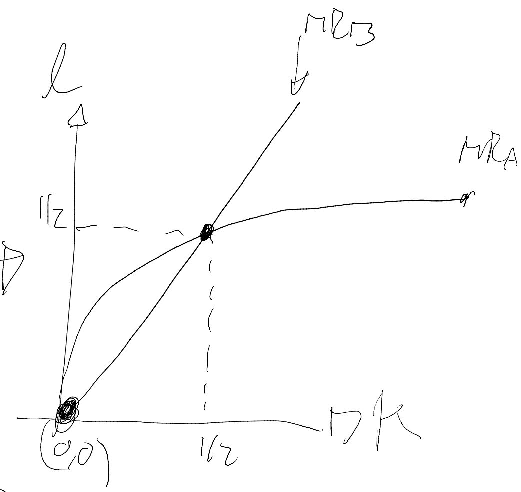
$\frac{1}{2}K^{1/2} = l^{3/2}$

$\frac{1}{4}K = l^3$

$\sqrt[3]{\frac{1}{4}K} = l = MR_A(K)$

$\frac{\partial U_B}{\partial K} = \frac{1}{4}\frac{l^{1/2}}{K^{1/2}} - \frac{1}{4} = 0 \Rightarrow \frac{l^{1/2}}{K^{1/2}} = 1$

$l = K = MR_B(l)$



$\left(\frac{1}{4}K\right)^{1/3} = K$

$\frac{1}{4}K = K^3$

~~G' NO HACER~~ $\cancel{\frac{1}{4} = K^2}$ $\cancel{K = \frac{1}{2}}$

$\frac{1}{4}K - K^3 = 0$

$K\left(\frac{1}{4} - K^2\right) = 0$

$\boxed{\begin{matrix} K = 0 \\ l = 0 \end{matrix}}$ $\quad K^2 = \frac{1}{4}$ $\quad \boxed{\begin{matrix} K = 1/2 \\ l = 1/2 \end{matrix}}$

$EN = \{(0,0), (\frac{1}{2}, \frac{1}{2})\}$.

(c) $\Pi = \sqrt{Kl} - \frac{l^2}{4} - \frac{K}{4}$

<u>CPO</u>

$\frac{1}{2}\frac{K^{1/2}}{l^{1/2}} - \frac{l}{2} = 0 \Rightarrow \frac{1}{2}\frac{K^{1/2}}{l^{1/2}} = l/2 \Rightarrow \frac{K^{1/2}}{l^{1/2}} = l$

$\frac{1}{2}\frac{l^{1/2}}{K^{1/2}} - \frac{1}{4} = 0 \Rightarrow \frac{1}{2}\frac{l^{1/2}}{K^{1/2}} = 1/4$

$\frac{l^{1/2}}{K^{1/2}} = \frac{1}{2}$

$\Rightarrow \boxed{l = 2}$

$K^{1/2} = 2l^{1/2}$

$K = 4l$

$K^{1/2}$ L

$$\frac{K^{1/2}}{l^{1/2}} = 2$$

$K = 4l$

$$\boxed{K = 8}$$