Repaso Parcial 2a

Thursday, October 24, 2019 4:02 PM

	W	X	Y
f	0,2	0,2	10,1
g	-1,-1	3,2	-6,-3
h	0,-1	2,1	4,0

O.P. $(f,W)\,(f,X)\,(f,Y)$

(2) $X \gg Y$

(3) $P_Y = 0$

(b) $P_f, P_g, P_h = \left(0, \frac{1}{3}, \frac{2}{3}\right) = \sigma_A \longrightarrow$ **ANA**

$P_W, P_X, P_Y = \left(\frac{1}{2}, \frac{1}{2}, 0\right) = \sigma_B$

$\mathbb{E}(U_A(f, \sigma_B)) = \frac{1}{2} 0 + \frac{1}{2} 0 = 0$

$\mathbb{E}(U_A(g, \sigma_B)) = -1\frac{1}{2} + 3\frac{1}{2} = 1$

$\mathbb{E}(U_A(h, \sigma_B)) = 0\frac{1}{2} + 2\frac{1}{2} = 1$

ANA SI ESTA MR A σ_B

BETO $\mathbb{E}(U_B(\sigma_A, W)) = 0 \cdot 2 + -1 \cdot \frac{1}{3} + -1 \cdot 2/3 = -1$

$\mathbb{E}(U_B(\sigma_A, X)) = 0 \cdot 2 + -2\left(\frac{1}{3}\right) + 1\left(\frac{2}{3}\right) = 0$

$MR_B(\sigma_A) = (0, 1, 0) \neq \left(\frac{1}{2}, \frac{1}{2}, 0\right)$

NO ES F.N.

a) $\sigma_A = \left(0, \frac{2}{3}, \frac{1}{3}\right)$

$\sigma_B = \left(\frac{1}{2}, \frac{1}{2}, 0\right)$

Ana

$\sigma_B = \left(\frac{1}{2}, \frac{1}{2}, 0\right)$

ANA

$\mathbb{E}(U_A(f, \sigma_B)) = 0$ (IGUAL A LA OPCION B)

$\mathbb{E}(U_A(g, \sigma_B)) = 1$

$E(U_A(h, \sigma_B)) = 1$

BETO

$\mathbb{E}(U_B(\sigma_A, w)) = 2\cdot 0 + -1\left(\frac{2}{3}\right) + (-1)\left(\frac{1}{3}\right) = -1$

$E(U_B(\sigma_A, x)) = 2\cdot 0 + (-2)\left(\frac{2}{3}\right) + (1)\left(\frac{1}{3}\right) = -1$

MR ES CUALQUIER COMB. ENTRE W Y X. INCLUYE $\sigma_B = \left(\frac{1}{2}, \frac{1}{2}, 0\right)$

SI ES E.N.

METODO LARGO (TODOS LOS E.N.)

4:02 PM

	w	x	y
f	0,2	0,2	10,1
g	-1,-1	3,2	-6,-3
h	0,-1	2,1	4,0

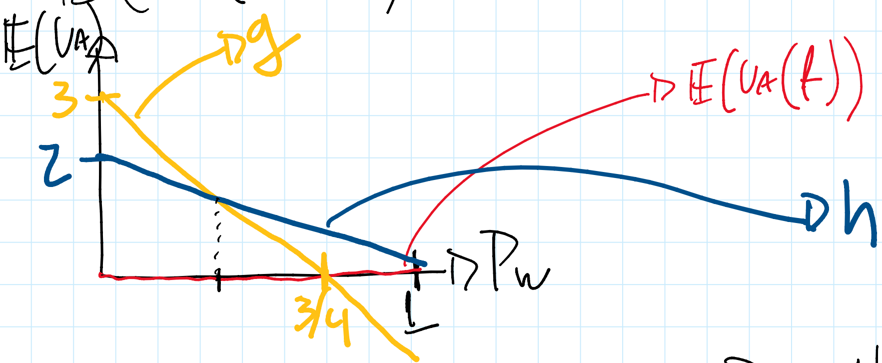
$\mathbb{E}(U_A(f, \sigma_B = (P_w, 1-P_w, 0))) = 0P_w + 0(1-P_w) = 0$

$\mathbb{E}(U_A(g, \sigma_B)) = -1P_w + 3(1-P_w) = 3-4P_w$

$\mathbb{E}(U_A(h, \sigma_B)) = 0P_w + 2(1-P_w) = 2-2P_w$

$$\mathbb{E}(U_A(h,\sigma_B)) = 0P_w + 2(1-P_w) = 2-2P_w$$

$$3-4P_w = 2-2P_w$$
$$1 = 2P_w$$
$$\frac{1}{2} = P_w$$



$$MR_A(\sigma_B) = \begin{cases} (0,1,0) & \text{si } P_w \leq 1/2 \\ (0,0,1) & \text{si } 1/2 \leq P_w < 1 \\ (0,q,1-q) & \text{si } P_w = 1/2 \\ (q,0,1-q) & \text{si } P_w = 1 \end{cases}$$

Beto

$\sigma_A = (P_f, P_g, 1-P_f-P_g)$

$$E(U_B(\sigma_A, W)) = 2P_f - 1P_g + (-1)(1-P_f-P_g) = 2P_f - \cancel{P_g} - 1 + P_f + \cancel{P_g} = 3P_f - 1$$

$$E(U_B(\sigma_A, X)) = 2P_f - 2P_g + 1(1-P_f-P_g) = 2P_f - 2P_g + 1 - P_f - P_g = P_f - 3P_g + 1$$

$W \gg X$ ssi $3P_f - 1 > P_f - 3P_g + 1$

$$2P_f + 3P_g \geq 2$$
$$P_f + \frac{3}{2}P_g \geq 1$$

$$MR_B(\sigma_A) = \begin{cases} (1,0,0) & \text{si } P_f + \frac{3}{2}P_g \geq 1 \\ (P,1-P,0) & \text{si } P_f + \frac{3}{2}P_g = 1 \\ (0,1,0) & \text{si } P_f + \frac{3}{2}P_g \leq 1 \end{cases}$$

CASOS

$\sigma_A = (0,1,0)$ osea $P_f = 0$, $P_g = 1 \rightarrow MR_B = (1,0,0) = \cancel{(q,0,1-q)}$

$\sigma_A=(0,1,0)$ osea $P_f=0$, $P_g=1$ $\rightarrow MR_B=(1,0,0)=$ ~~[illegible]~~

$MR_A(1,0,0)=(q,0,1-q)$

No es E.N.

$\sigma_A=(0,0,1) \rightarrow M_B=(0,1,0) \rightarrow MR_A(0,1,0)=(0,1,0)$

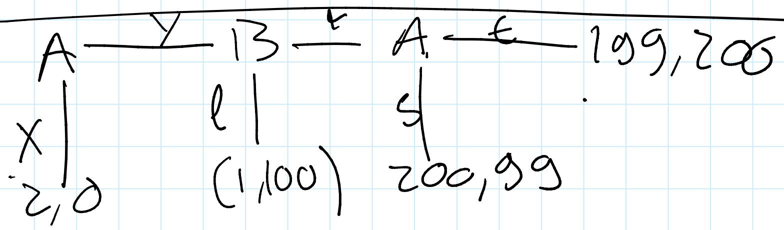
$\rightarrow \nexists$

No es E.N.

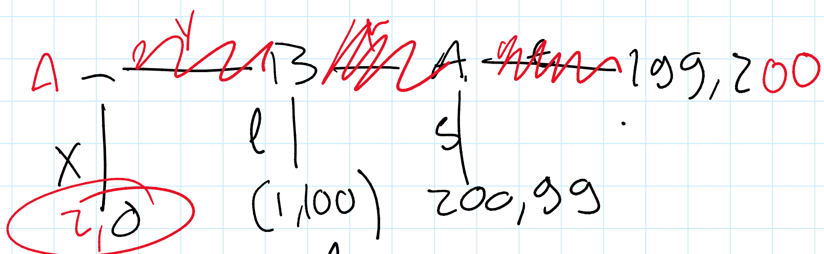
Hace B — Hace A

$\sigma_A=(0,q,1-q) \rightarrow MR_B=$ 3 casos

- $\sum_2 q \leq 1 \rightarrow (0,1,0) \rightarrow (0,1,0)$ $\rightarrow \nexists$
- $\sum_2 q = 1 \rightarrow (p,1-p,0)$



Inducción hacia atrás

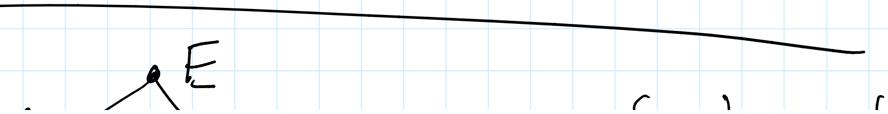


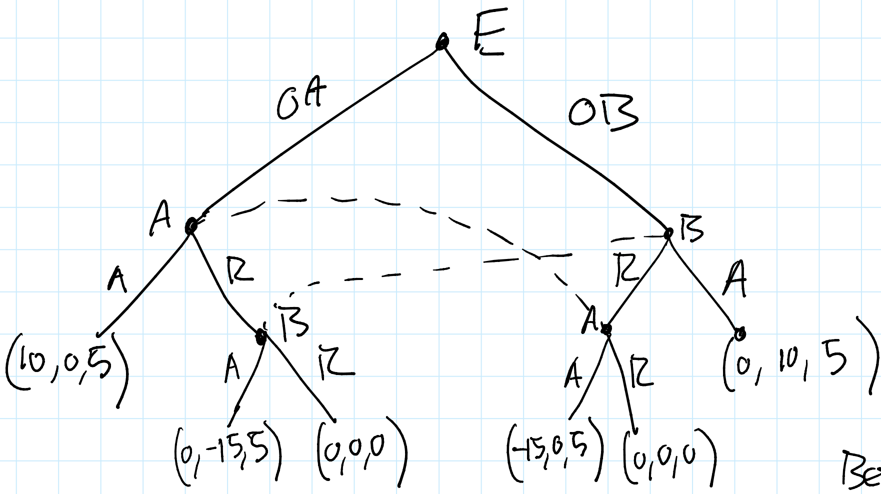
	l	r
XS	2,0	2,0
XE	2,0	2,0
YS	1,100	~~200~~,99
YE	1,100	199,200

$\rightarrow$ O.P.

EN = (XS, l)

(XE, l) No es EPS





$S_E = \{OA, OB\}$

$S_A = \{A, R\}$

$S_B = \{A, R\}$

$(OA, A, A) = (10, 0, 5)$

$(OA, A, R) = (10, 0, 5)$

$(OA, R, A) = (0, -15, 5)$

$(OA, R, R) = (0, 0, 0)$

$(OB, A, A) = (0, 10, 5)$

$(OB, A, R) = (-15, 0, 5)$

$(OB, R, A) = (0, 10, 5)$

$(OB, R, R) = (0, 0, 0)$

Beto

$MR_A((OA, ?)) =$

$MR_A(OA, A) = A$

$MR_A(OA, R) = A$

Argumentar (OA, A, A) es un E.N.

$E \begin{cases} OA = 5 \\ OB = 5 \end{cases}$ DA IGUAL → OA es MR.

$A \begin{cases} A \to 0 \\ R \to 0 \end{cases}$ → MR es A

$B \begin{cases} A \to 0 \\ R \to 0 \end{cases}$ → A es MR

$(\sigma_E = (\frac{1}{2}, \frac{1}{2}), R, R)$ es un E.N.

Empresa → GANO 0 sin importar

G → randomizo ✓

EMPRESA → GANO

G → RANDOMIZO ✓

ANA → $\mathbb{E}(U_A(\sigma_E, A, R)) = \frac{1}{2} \cdot 10 + \frac{1}{2}(-15) = -\frac{5}{2}$

$MR_A = R$ $\quad \mathbb{E}((U_A(\sigma_E, R, R)) = 0\frac{1}{2} + 0\frac{1}{2} = 0$

BETO

$\mathbb{E}(U_B(\sigma_E, R, A)) = -5/2$ $\quad MR_B = R$

$\mathbb{E}(U_B(\sigma_E, R, R) = 0$