1. Para cada jugador i y etapa t, determina el conjunto X_{it}.

$i = \{1, 2, 3\}$ $\quad t = \{1, 2, 3, 4, 5\}$

$X_{11} = \{a_1, a_2\}$

$X_{22} = \{a_3, a_4\}$

$X_{33} = \{a_5, a_6, a_7, a_8, a_9, a_{10}, a_{11}, a_{12}\}$

$X_{14} = \{a_{13}, a_{14}, a_{15}, a_{16}\}$

2. Determina el conjunto F de todas las historias factibles del juego. Nómbralas h^k y escribe cada historia en la forma $a_{k1}, a_{k2}, a_{k3}, a_{k4}$.

$h^1 = a_1, a_3, a_5, a_{13}$

$a_{11} = a_1$ (J1 en $t=1$)

$a_{22} = a_3$ (J_2 en $t=2$)

$a_{33} = a_5$ (J_3 en $t=3$)

$a_{14} = a_{13}$ (J_1 en $t=4$)

$h^2 = a_1, a_3, a_5, a_{14}$

$h^3 = a_1, a_3, a_6, a_{13}$

$h^4 = a_1, a_3, a_6, a_{14}$

$h^5 = a_1, a_4, a_7, a_{13}$

$h^6 = a_1, a_4, a_7, a_{14}$

$h^7 = a_1, a_4, a_8, a_{13}$

$h^8 = a_1, a_4, a_8, a_{14}$

$h^9 = a_2, a_3, a_9, a_{15}$

$h^{10} = a_2, a_3, a_9, a_{16}$

$h^{11} = a_2, a_3, a_{10}, a_{15}$

$h^{12} = a_2, a_3, a_{10}, a_{16}$

$h^{13} = a_2, a_4, a_{11}, a_{15}$

$h^{14} = a_2, a_4, a_{11}, a_{16}$

$h^{15} = a_2, a_4, a_{12}, a_{15}$

$h^{16} = a_2, a_4, a_{12}, a_{16}$

$F = \{h^1, h^2, h^3, h^4, h^5, h^6, h^7, h^8, h^9, h^{10}, h^{11}, h^{12}, h^{13}, h^{14}, h^{15}, h^{16}\}$

3. Para cada etapa t e historia j, determina la historia parcial $a_{t-1}(h^j)$. En la etapa $t=1$ la historia es $a_0(h^j)=\emptyset$

$h^1 = a_1, a_3, a_5, a_{13}$

$a_0(h_1)=\emptyset$

$a_1(h_1)=a_1$

$a_2(h_1)=a_1, a_3$

$a_3(h_1)=a_1, a_3, a_5$

$a_4(h_1)=a_1, a_3, a_5, a_{13}$

$h^2 = a_1\ a_3\ a_5\ a_{14}$

$a_1(h_2)=a_1$

$a_2(h_2)=a_1\ a_3$

$a_3(h_2)=a_1\ a_3\ a_5$

$a_4(h_2)=a_1\ a_3\ a_5\ a_{14}$

$h^3 = a_1\ a_3\ a_6\ a_{13}$

$a_1(h_3)=a_1$

$a_2(h_3)=a_1\ a_3$

$a_3(h_3)=a_1\ a_3\ a_6$

$a_4(h_3)=a_1\ a_3\ a_6\ a_{13}$

$h^4 = a_1\ a_3\ a_6\ a_{14}$

$a_1(h^4)=a_1$

$a_2(h^4)=a_1\ a_3$

$a_3(h^4)=a_1\ a_3\ a_6$

$a_4(h^4)=a_1\ a_3\ a_6\ a_{14}$

$h^5 = a_1\ a_4\ a_7\ a_{13}$

$a_1(h^5)=a_1$

$a_2(h^5)=a_1\ a_4$

$a_3(h^5)=a_1\ a_4\ a_7$

$a_4(h^5)=a_1\ a_4\ a_7\ a_{13}$

$h^6 = a_1\ a_4\ a_7\ a_{14}$

$a_1(h^6)=a_1$

$a_2(h^6)=a_1\ a_4$

$a_3(h^6)=a_1\ a_4\ a_7$

$a_4(h^6)=a_1\ a_4\ a_7\ a_{14}$

$h^7 = a_1 a_4 a_8 a_{13}$

$a_1(h^7) = a_1$

$a_2(h^7) = a_1 a_4$

$a_3(h^7) = a_1 a_4 a_8$

$a_4(h^7) = a_1 a_4 a_8 a_{13}$

$h^8 = a_1 a_4 a_8 a_{14}$

$a_1(h^8) = a_1$

$a_2(h^8) = a_1 a_4$

$a_3(h^8) = a_1 a_4 a_8$

$a_4(h^8) = a_1 a_4 a_8 a_{14}$

$h^9 = a_2 a_3 a_9 a_{15}$

$a_1(h^9) = a_2$

$a_2(h^9) = a_2 a_3$

$a_3(h^9) = a_2 a_3 a_9$

$a_4(h^9) = a_2 a_3 a_9 a_{15}$

$h^{10} = a_2 a_3 a_9 a_{16}$

$a_1(h^{10}) = a_2$

$a_2(h^{10}) = a_2 a_3$

$a_3(h^{10}) = a_2 a_3 a_9$

$a_4(h^{10}) = a_2 a_3 a_9 a_{16}$

$h^{11} = a_2 a_3 a_{10} a_{15}$

$a_1(h^{11}) = a_2$

$a_2(h^{11}) = a_2 a_3$

$a_3(h^{11}) = a_2 a_3 a_{10}$

$a_4(h^{11}) = a_2 a_3 a_{10} a_{15}$

$h^{12} = a_2 a_3 a_{10} a_{16}$

$a_1(h^{12}) = a_2$

$a_2(h^{12}) = a_3 a_3$

$a_3(h^{12}) = a_2 a_3 a_{10}$

$a_4(h^{12}) = a_2 a_3 a_{10} a_{16}$

$h^{13} = a_2 a_4 a_{11} a_{15}$

$a_1(h^{13}) = a_2$

$a_2(h^{13}) = a_2 a_4$

$a_3(h^{13}) = a_2 a_4 a_{11}$

$a_4(h^{13}) = a_2 a_4 a_{11} a_{15}$

$h^{14} = a_2 a_4 a_{11} a_{16}$

$a_1(h^{14}) = a_2$

$a_2(h^{14}) = a_2 a_4$

$a_3(h^{14}) = a_2 a_4 a_{11}$

$a_4(h^{14}) = a_2 a_4 a_{11} a_{16}$

$h^{15} = a_2 a_4 a_{12} a_{15}$

$a_1(h^{15}) = a_2$

$a_2(h^{15}) = a_2 a_4$

$a_3(h^{15}) = a_2 a_4 a_{12}$

$a_4(h^{15}) = a_2 a_4 a_{12} a_{15}$

$h^{16} = a_2 a_4 a_{12} a_{16}$

$a_1(h^{16}) = a_2$

$a_2(h^{16}) = a_2 a_4$

$a_3(h^{16}) = a_2 a_4 a_{12}$

$a_4(h^{16}) = a_2 a_4 a_{12} a_{16}$

4. Correlacionar cada historia parcial $a_{k-1}(h^j)$ con un nodo, X_k o Z^j

E_1 $a_0(h^j) = \emptyset \rightarrow X_0$

E_2 $a_1(h^j) = a_1 \rightarrow X_1$, $a_1(h^j) = a_2 \rightarrow X_2$

E_3 $a_2(h^j) = a_1 a_3 \rightarrow X_3$, $a_2(h^j) = a_1, a_4 \rightarrow X_4$

$a_2(h^j) = a_2 a_3 \rightarrow X_5$, $a_2(h^j) = a_2 a_4 \rightarrow X_6$

E_4 $a_3(h_j) = a_1 a_3 a_5 \rightarrow X_7$, $a_3(h^j) = a_1 a_3 a_6 \rightarrow X_8$

$a_3(h_j) = a_1 a_4 a_7 \rightarrow X_9$, $a_3(h^j) = a_1 a_4 a_8 \rightarrow X_{10}$

$a_3(h_j) = a_2 a_3 a_9 \rightarrow X_{11}$, $a_3(h_j) = a_2 a_3 a_{10} \rightarrow X_{12}$

$a_3(h_j) = a_2 a_4 a_{11} \rightarrow X_{13}$, $a_3(h_j) = a_2 a_4 a_{12} \rightarrow X_{14}$

E_5 $a_4(h_j) = a_1 a_3 a_5 a_{13} \rightarrow Z_1$, $a_4(h_j) = a_1 a_3 a_5 a_{14} \rightarrow Z_2$

$a_4(h_j) = a_1 a_3 a_6 a_{13} \rightarrow Z_3$, $a_4(h_j) = a_1 a_3 a_6 a_{14} \rightarrow Z_4$

$a_4(h_j) = a_1 a_4 a_7 a_{13} \rightarrow Z_5$, $a_4(h_j) = a_1 a_4 a_7 a_{14} \rightarrow Z_6$

$a_4(h_j) = a_1 a_4 a_8 a_{13} \rightarrow Z_7$, $a_4(h_j) = a_1 a_4 a_8 a_{14} \rightarrow Z_8$

$a_4(h^j) = a_2 a_3 a_9 a_{15} \rightarrow Z_9$, $a_4(h^j) = a_2 a_3 a_9 a_{16} \rightarrow Z_{10}$

$a_4(h_j) = a_2 a_3 a_{10} a_{15} \rightarrow Z_{11}$, $a_4(h^j) = a_2 a_3 a_{10} a_{16} \rightarrow Z_{12}$

$a_4(h_j) = a_2 a_4 a_{11} a_{15} \rightarrow Z_{13}$, $a_4(h^j) = a_2 a_4 a_{11} a_{16} \rightarrow Z_{14}$

$a_4(h^j) = a_2 a_4 a_{12} a_{15} \rightarrow Z_{15}$, $a_4(h^j) = a_2 a_4 a_{12} a_{16} \rightarrow Z_{16}$

5. Para cada jugador i, etapa t e historia parcial (o nodo) $a_{t-1}(h^t)$, determina el conjunto $A_{it}[a_{t-1}(h^t)]$ de acciones factibles en $a_{t-1}(h^t)$

→ Etapa $t=1$, jugador: 1

Nodo (x_0): $A_{11}[x_0] = \{a_1, a_2\}$

→ Etapa $t=2$, jugador: 2

Nodo $x_1(a_1)$: $A_{22}[x_1] = \{a_3, a_4\}$ Nodo $(x_2(a_2)$: $A_{23}[x_2] = \{a_3, a_4\}$

→ Etapa $t=3$: jugador: 3

Nodo $x_3(a_1a_3)$: $A_{33}[x_3] = \{a_5, a_6\}$ Nodo $x_4(a_1a_4)$: $A_{33}[x_4] = \{a_7, a_8\}$

Nodo $x_5(a_2a_5)$: $A_{33}[x_5] = \{a_9\ a_{10}\}$ Nodo $x_6(a_2a_4)$: $A_{33}[x_6] = \{a_{11}, a_{12}\}$

→ Etapa $t=4$: jugador: 1

Nodo $x_7(a_1a_3a_5)$

$A_{1,4}[x_7] = \{a_{13}, a_{14}\}$

Nodo $x_8(a_1a_3a_6)$

$A_{1,4}[x_8] = \{a_{13}, a_{14}\}$

Nodo $x_9(a_1a_4a_7)$

$A_{1,4}[x_9] = \{a_{13}, a_{14}\}$

Nodo $x_{10}(a_1a_4a_8)$

$A_{1,4}[x_{10}] = \{a_{13}, a_{14}\}$

Nodo $x_{11}(a_2a_3a_9)$

$A_{1,4}[x_{11}] = \{a_{15}, a_{16}\}$

Nodo $x_{12}(a_2a_3a_{10})$

$A_{1,4}[x_{12}] = \{a_{15}, a_{16}\}$

Nodo $x_{13}(a_2a_4a_{11})$

$A_{1,4}[x_{13}] = \{a_{15}, a_{16}\}$

Nodo $x_{14}(a_2a_4a_{12})$

$A_{1,4}[x_{14}] = \{a_{15}\ a_{16}\}$

6. Para cada jugador i y etapa t, determina el conjunto S_{it} de todas las estrategias puras. Escribe los conjuntos completos.

tiempo = 1 jugador: 1

$S_{11} = \{(a_1), (a_2)\}$

tiempo = 2 jugador: 2

$S_{22} = \{(a_3, a_4), (a_3, a_3), (a_4, a_3), (a_4, a_4)\}$

tiempo = 3 jugador: 3

$S_{33} = \{(a_5, a_7, a_9, a_{11}), (a_5, a_7, a_9, a_{12}),$
$(a_5, a_7, a_{10}, a_{11}), (a_5, a_7, a_{10}, a_{12}),$
$(a_5, a_8, a_9, a_{11}), (a_5, a_8, a_9, a_{12}),$
$(a_5, a_8, a_{10}, a_{11}), (a_5, a_8, a_{10}, a_{12}),$
$(a_6, a_7, a_9, a_{11}), (a_6, a_7, a_9, a_{12}),$
$(a_6, a_7, a_{10}, a_{11}), (a_6, a_7, a_{10}, a_{12}),$
$(a_6, a_8, a_9, a_{11}), (a_6, a_8, a_9, a_{12}),$
$(a_6, a_8, a_{10}, a_{11}), (a_6, a_8, a_{10}, a_{12})\}$

tiempo = 4 jugador: 1

$S_{41} = \{(a_{13}, a_{15}), (a_{13}, a_{16}), (a_{14}, a_{15}), (a_{14}, a_{16})\}$

7. Elige una estrategia pura de cada jugador en cada etapa (un perfil de estrategias) y muestra qué historia determina ese perfil.

$J_1(S_1)$ $S_1 = (a_1, a_{13})$

$J_2(S_2)$ $S_2 = (a_3)$

$J_3(S_3)$ $S_3 = (a_5, a_7, a_9, a_{11})$

$$h_1 = a_1 a_3 a_5 a_{13}$$

8. Elige una historia factible y muestra el perfil de estrategias puras que conduce a ella. ¿Es único este perfil?

$$h_1 = a_1 a_3 a_5 a_{13}$$

J_1 $t=1$ elige a_1

J_2 $t=2$ Elige a_3

J_3 $t=3$ Elige a_5

J_1 $t=4$ Elige a_{13}

Para que h_1 se culmine, cada jugador debe hacer

$(s_1, s_2, s_3) = ((a_1, a_{13})(a_3)(a_5))$

por lo que el perfil es único

9.- Introduce un perfil de estrategias mixtas $(\langle \Omega_{16}, F_{i,t}, \lambda_{i,t} \rangle P_{i,t})$

$P_{i,t}: \Omega \to S_{i,t}$, una para cada jugador i en cada etapa t.

No uses espacios con medida de probabilidad uniforme.

Determina explícitamente los conjuntos $p^{-1}(w)$ y su probabilidad.

- $A_{11}[X_0] = \{a_1, a_2\} \to P(a_1) = 0.4, \; P(a_2) = 0.6$
- $A_{22}[X_1] = \{a_3, a_4\} \to P(a_3) = 0.3, \; P(a_4) = 0.7$
- $A_{22}[X_2] = \{a_3, a_4\} \to P(a_3) = 0.7, \; P(a_4) = 0.3$
- $A_{33}[X_3] = \{a_5, a_6\} \to P(a_5) = 0.85, \; P(a_6) = 0.15$
- $A_{33}[X_4] = \{a_7, a_8\} \to P(a_7) = 0.63, \; P(a_8) = 0.37$
- $A_{33}[X_5] = \{a_9, a_{10}\} \to P(a_9) = 0.27, \; P(a_{10}) = 0.73$
- $A_{33}[X_6] = \{a_{11}, a_{12}\} \to P(a_{11}) = 0.13, \; P(a_{12}) = 0.87$
- $A_{14}[X_7] = \{a_{13}, a_{14}\} \to P(a_{13}) = 0.6, \; P(a_{14}) = 0.4$
- $A_{14}[X_8] = \{a_{13}, a_{14}\} \to P(a_{15}) = 0.8, \; P(a_{14}) = 0.2$
- $A_{14}[X_9] = \{a_{13}, a_{14}\} \to P(a_{13}) = 0.15, \; P(a_{14}) = 0.85$
- $A_{14}[X_{10}] = \{a_{13}, a_{14}\} \to P(a_{13}) = 0.23, \; P(a_{14}) = 0.77$
- $A_{14}[X_{11}] = \{a_{15}, a_{16}\} \to P(a_{15}) = 0.35 \quad P(a_{16}) = 0.65$
- $A_{14}[X_{12}] = \{a_{15}, a_{16}\} \to P(a_{15}) = 0.9, \; P(a_{16}) = 0.1$
- $A_{14}[X_{13}] = \{a_{15}, a_{16}\} \to P(a_{15}) = 0.2, \; P(a_{16}) = 0.8$
- $A_{14}[X_{14}] = \{a_{15}, a_{16}\} \to P(a_{15}) = 0.3, \; P(a_{16}) = 0.7$

$A_{11}[X_0] \rightarrow \sigma_{11} = P(a_1) + P(a_2) = 0.4 + 0.6 = 1$

$A_{22}[X_1] \rightarrow \sigma_{22} = P(a_3) + P(a_4) = 0.3 + 0.7 = 1$

$A_{33}[X_3] \rightarrow \sigma_{33} = P(a_5) + P(a_6) = 0.85 + 0.15 = 1$

$A_{14}[X_7] \rightarrow \sigma_{14} = P(a_{13}) + P(a_{14}) = 0.6 + 0.4 = 1$

$h_1 = (a_1, a_3, a_5, a_{13})$

$P(h_1) = (0.4) * (0.3) * (0.85) * (0.6) =$

10. Determina la distribución de probabilidad que induce el perfil que elegiste sobre el conjunto F de las historias. Muestra que es en efecto una distribución.

$h_1 = (a_1, a_3, a_5, a_{14}) \rightarrow P(h_1) = (0.6)\cdot(0.7)\cdot(0.27)\cdot(0.2) =$

$h_2 = (a_1, a_3, a_5, a_{13}) \rightarrow P(h_2) = (0.6)\cdot(0.7)\cdot(0.27)\cdot(0.3) =$

$h_3 = (a_1, a_3, a_6, a_{14}) \rightarrow P(h_3) = (0.6)\cdot(0.7)\cdot(0.38)\cdot(0.2) =$

$h_4 = (a_1, a_3, a_6, a_{13}) \rightarrow P(h_4) = (0.6)(0.7)(0.38)(0.3) =$

$h_5 = (a_1, a_4, a_7, a_{15}) \rightarrow P(h_5) = (0.6)(0.3)(0.15)(0.3) =$

$h_6 = (a_1, a_4, a_7, a_{14}) \rightarrow P(h_6) = (0.6)(0.3)(0.15)(0.2) =$

$h_7 = (a_1, a_4, a_8, a_{13}) \rightarrow P(h_7) = (0.6)(0.3)(0.23)(0.3) =$

$h_8 = (a_1, a_4, a_8, a_{14}) \rightarrow P(h_8) = (0.6)(0.3)(0.23)(0.2) =$

$h_9 = (a_2, a_3, a_9, a_{15}) \rightarrow P(h_9) = (0.4)(0.7)(0.13)(0.2) =$

$h_{10} = (a_2, a_3, a_9, a_{16}) \rightarrow P(h_{10}) = (0.4)(0.7)(0.13)(0.3) =$

$h_{11} = (a_2, a_3, a_{10}, a_{15}) \rightarrow P(h_{11}) = (0.4)(0.7)(0.32)(0.2) =$

$h_{12} = (a_2, a_3, a_{10}, a_{16}) \rightarrow P(h_{12}) = (0.4)(0.7)(0.32)(0.3) =$

$h_{13} = (a_2, a_4, a_{11}, a_{15}) \rightarrow P(h_{13}) = (0.4)(0.3)(0.21)(0.2) =$

$h_{14} = (a_2, a_4, a_{11}, a_{16}) \rightarrow P(h_{14}) = (0.4)(0.3)(0.21)(0.3) =$

$h_{15} = (a_2, a_4, a_{12}, a_{15}) \rightarrow P(h_{15}) = (0.4)(0.3)(0.34)(0.2) =$

$h_{16} = (a_2, a_4, a_{12}, a_{16}) \rightarrow P(h_{16}) = (0.4)(0.3)(0.34)(0.3) =$

9. Introduce un perfil de estrategias mixtas ($\langle \Omega_{it}, \mathfrak{I}_{it}, \lambda_{it} \mathrm{i} \rangle, \rho_{it}$), $\rho_{it} : \rightarrow S_{it}$, una para cada jugador i en cada etapa t. No uses espacios con medida de probabilidad uniforme. Determina explícitamente los conjuntos $\rho^{-1}(\omega)$ y su probabilidad.

Trabaje en lápiz (hoja adjunta) un perfil, pero me perdi con los calculos entre tantas combinaciones, asi que para facilitar la validación de las probabilidades trabaje una hoja de excel. Representando el arbol en matrices y fue mas facil verificar que los numeros fueran correctos y ver todas las historias en conjunto.

Las columnas indican el nodo en donde se situa y las filas con las estrategias, con esto en la intersección esta la probabilidad asignada a cada estrategia. Cada columna suma 1, validando que sea correcta la asignacion de probabilidades.

	X0	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14
a1	0.4														
a2	0.6														
a3		0.3	0.7												
a4		0.7	0.3												
a5				0.85											
a6				0.15											
a7					0.63										
a8					0.37										
a9						0.27									
a10						0.73									
a11							0.13								
a12							0.87								
a13								0.6	0.8	0.15	0.23				
a14								0.4	0.2	0.85	0.77				
a15												0.35	0.9	0.2	0.3
a16												0.65	0.1	0.8	0.7
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

10. Determina la distribución de probabilidad que induce el perfil que elegiste sobre el conjunto F de las historias. Muestra que es en efecto una distribución.

Guiandome del árbol, capture todas los caminos posibles.

	E1	E2		E3				E4								
	X0	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	historia
h1	a1	a3		a5				a13								a1a3a5a13
h2	a1	a3		a5				a14								a1a3a5a14
h3	a1	a3		a6					a13							a1a3a6a13
h4	a1	a3		a6					a14							a1a3a6a14
h5	a1	a4			a7					a13						a1a4a7a13
h6	a1	a4			a7					a14						a1a4a7a14
h7	a1	a4			a8						a13					a1a4a8a13
h8	a1	a4			a8						a14					a1a4a8a14
h9	a2		a3			a9						a15				a2a3a9a15
h10	a2		a3			a9						a16				a2a3a9a16
h11	a2		a3			a10							a15			a2a3a10a15
h12	a2		a3			a10							a16			a2a3a10a16
h13	a2		a4				a11							a15		a2a4a11a15
h14	a2		a4				a11							a16		a2a4a11a16
h15	a2		a4				a12								a15	a2a4a12a15
h16	a2		a4				a12								a16	a2a4a12a16

Posterior, guiandome con la primer matriz, asigne los valores de probabilidad a cada estrategia y validar que la suma de todas las probabilidades sea igual a 1.

	E1	E2		E3				E4									
	X0	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	P(z)	
h1	0.40	0.30	1	0.85	1	1	1	0.60	1	1	1	1	1	1	1	0.06	z1
h2	0.40	0.30	1	0.85	1	1	1	0.40	1	1	1	1	1	1	1	0.04	z2
h3	0.40	0.30	1	0.15	1	1	1	1	0.80	1	1	1	1	1	1	0.01	z3
h4	0.40	0.30	1	0.15	1	1	1	1	0.20	1	1	1	1	1	1	0.00	z4
h5	0.40	0.70	1	1	0.63	1	1	1	1	0.15	1	1	1	1	1	0.03	z5
h6	0.40	0.70	1	1	0.63	1	1	1	1	0.85	1	1	1	1	1	0.15	z6
h7	0.40	0.70	1	1	0.37	1	1	1	1	1	0.23	1	1	1	1	0.02	z7
h8	0.40	0.70	1	1	0.37	1	1	1	1	1	0.77	1	1	1	1	0.08	z8
h9	0.60	1	0.70	1	1	0.27	1	1	1	1	1	0.35	1	1	1	0.04	z9
h10	0.60	1	0.70	1	1	0.27	1	1	1	1	1	0.65	1	1	1	0.07	z10
h11	0.60	1	0.70	1	1	0.73	1	1	1	1	1	1	0.90	1	1	0.28	z11
h12	0.60	1	0.70	1	1	0.73	1	1	1	1	1	1	0.10	1	1	0.03	z12
h13	0.60	1	0.30	1	1	1	0.13	1	1	1	1	1	1	0.20	1	0.00	z13
h14	0.60	1	0.30	1	1	1	0.13	1	1	1	1	1	1	0.80	1	0.02	z14
h15	0.60	1	0.30	1	1	1	0.87	1	1	1	1	1	1	1	0.30	0.05	z15
h16	0.60	1	0.30	1	1	1	0.87	1	1	1	1	1	1	1	0.70	0.11	z16
																1.00	

11. Conforme al perfil de estrategias mixtas elegido($\langle \Omega_{it}$, $\mathfrak{I}_{it}$, λ_{it}i$\rangle$, ρ_{it})¿cuál es la utilidad esperada de cada jugador?

Teniendo la probabilidad de cada hoja se agrega la matriz de pagos para calcular la utilidad esperada de cada jugador en cada historia.

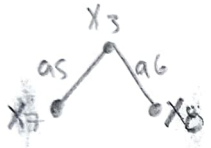
	E1	E2		E3				E4										Pagos			Uitlidad esperada		
	X0	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	P(z)		J1	J2	J3	J1	J2	J3
h1	0.40	0.30	1	0.85	1	1	1	0.60	1	1	1	1	1	1	1	0.06	z1	1	2	3	0.0612	0.1224	0.1836
h2	0.40	0.30	1	0.85	1	1	1	0.40	1	1	1	1	1	1	1	0.04	z2	2	-1	2	0.1224	-0.0612	0.1224
h3	0.40	0.30	1	0.15	1	1	1	1	0.80	1	1	1	1	1	1	0.01	z3	1	2	3	0.0612	0.1224	0.1836
h4	0.40	0.30	1	0.15	1	1	1	1	0.20	1	1	1	1	1	1	0.00	z4	3	-1	2	0.1836	-0.0612	0.1224
h5	0.40	0.70	1	1	0.63	1	1	1	1	0.15	1	1	1	1	1	0.03	z5	2	4	3	0.1224	0.2448	0.1836
h6	0.40	0.70	1	1	0.63	1	1	1	1	0.85	1	1	1	1	1	0.15	z6	1	-1	2	0.0612	-0.0612	0.1224
h7	0.40	0.70	1	1	0.37	1	1	1	1	1	0.23	1	1	1	1	0.02	z7	0	3	3	0	0.1836	0.1836
h8	0.40	0.70	1	1	0.37	1	1	1	1	1	0.77	1	1	1	1	0.08	z8	-1	-1	2	-0.0612	-0.0612	0.1224
h9	0.60	1	0.70	1	1	0.27	1	1	1	1	1	0.35	1	1	1	0.04	z9	1	3	-1	0.0612	0.1836	-0.0612
h10	0.60	1	0.70	1	1	0.27	1	1	1	1	1	0.65	1	1	1	0.07	z10	3	-1	2	0.1836	-0.0612	0.1224
h11	0.60	1	0.70	1	1	0.73	1	1	1	1	1	1	0.90	1	1	0.28	z11	-2	-1	-1	-0.1224	-0.0612	-0.0612
h12	0.60	1	0.70	1	1	0.73	1	1	1	1	1	1	0.10	1	1	0.03	z12	1	3	2	0.0612	0.1836	0.1224
h13	0.60	1	0.30	1	1	1	0.13	1	1	1	1	1	1	0.20	1	0.00	z13	1	2	-1	0.0612	0.1224	-0.0612
h14	0.60	1	0.30	1	1	1	0.13	1	1	1	1	1	1	0.80	1	0.02	z14	2	3	2	0.1224	0.1836	0.1224
h15	0.60	1	0.30	1	1	1	0.87	1	1	1	1	1	1	1	0.30	0.05	z15	4	2	-1	0.2448	0.1224	-0.0612
h16	0.60	1	0.30	1	1	1	0.87	1	1	1	1	1	1	1	0.70	0.11	z16	1	3	2	0.0612	0.1836	0.1224
																1.00							

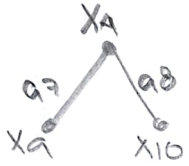
12: Dibuja todos y cada uno de los subjuegos del juego MC

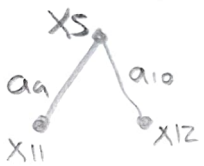
t_1 J_1

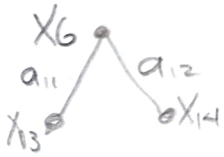
t_2 J_2

t_3 J_3

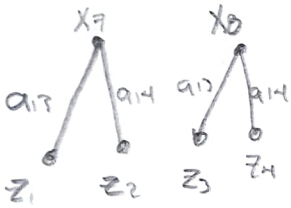


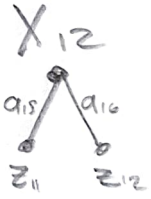


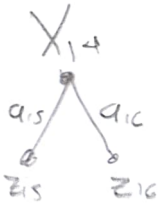




t_4 J_4







13. Usando inducción hacia atrás, dibuja todos los juegos reducidos de juego MC hasta encontrar el más pequeño ¿qué perfil de estrategias conduce a este resultado?

$J_4 t_4 \quad A_{14}[X_9]: u_1(z_5) > u_1(z_6) \longrightarrow a_{13}$

$J_3 t_3 \quad A_{33}[X_4]: u_1(a_7) > u_1(a_8) \longrightarrow a_7$

$J_2 t_2 \quad A_{22}[X_1]: u_1(a_4) > u_1(a_3) \longrightarrow a_4$

$J_1 t_1 \quad A_{11}[X_0]: u_1(a_1) > u_1(a_2) \longrightarrow a_1$