Taller 05

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1. Punto 1

Punto 1 , (A , B)

A dice: "nosotros tenemos la misma naturaleza"
$\Gamma_0 = \{(a \equiv (a \equiv b)), a\}$
$\Gamma_1 = \{(a \equiv (a \equiv b)), (\neg a)\}$

No es posible determinar la naturaleza de A y B

Con Γ_0

0.	$(\exists \mathbf{v} \mid \mathbf{v}$ satisface $\Gamma_0)$	
1.	$\mathbf{v}[(a \equiv (a \equiv b))] = \mathtt{T}$	Def.(p0)
2.	$\mathbf{v}[a] = \mathtt{T}$	Def.(p0)
3.	$\mathbf{v}[(a \equiv b)] = \mathtt{T}$	MT 2.23(≡)(p1, p2)
4.	$\mathbf{v}[b] = \mathtt{T}$	MTT 2.23 (≡)(p3, p2)

Con Γ_1

0.	$(\exists \mathbf{v} \mid \mathbf{v}$ satisface $\Gamma_1)$	
1.	$\mathbf{v}[(a \equiv (a \equiv b))] = \mathtt{T}$	Def.(p0)
2.	$\mathbf{v}[(\neg a)] = \mathtt{T}$	Def.(p0)
3.	$\mathbf{v}[(a \equiv b)] = \mathtt{F}$	MT 2.23(≡)(p2, p1)
4.	$\mathbf{v}[a] \neq \mathbf{v}[b]$	MT 2.23(≡)(p3)
5.	$\mathbf{v}[b] = \mathtt{T}$	(p4, p2)

2. Punto 2

Punto 2 , (A , B)

A dice: "al menos uno de nosotros es caballero"
$\Gamma_0 = \{(a \equiv (a \vee b)), a\}$
$\Gamma_1 = \{(a \equiv (a \vee b)), (\neg a)\}$

No se puede determinar la naturaleza de A y B

Con Γ_0

0.	$(\exists \mathbf{v} \mid \mathbf{v}$ satisface $\Gamma_0)$	
1.	$\mathbf{v}[(a \equiv (a \vee b))] = \mathtt{T}$	Def.(p0)
2.	$\mathbf{v}[a] = \mathtt{T}$	Def.(p0)

Con Γ_1

0.	$(\exists \mathbf{v} \mid \mathbf{v}$ satisface $\Gamma_0)$	
1.	$\mathbf{v}[(a \equiv (a \vee b))] = \mathtt{T}$	Def.(p0)
2.	$\mathbf{v}[(\neg a)] = \mathtt{T}$	Def.(p0)
3.	$\mathbf{v}[a] = \mathtt{F}$ y $\mathbf{v}[b] = \mathtt{F}$	

3. Punto 3

punto 3, (A , B , C)

A dice: "B es escudero"
B dice: "A y C son del mismo tipo"
$\Gamma_0 = \{(a \equiv (\neg b)), (b \equiv (a \equiv c)), a\}$
$\Gamma_1 = \{(a \equiv (\neg b)), (b \equiv (a \equiv c)), (\neg a)\}$

C es escudero

Con Γ_0

0.	$(\exists \mathbf{v}, \mid \mathbf{v}$ satisface $\Gamma_0)$	
1.	$\mathbf{v}[(a \equiv (\neg b))] = \mathtt{T}$	Def.(p0)
2.	$\mathbf{v}[(b \equiv (a \equiv c))] = \mathtt{T}$	Def.(p0)
3.	$\mathbf{v}[a] = \mathtt{T}$	Def.(p0)
4.	$\mathbf{v}[a] = \mathbf{v}[(\neg b)]$	MT 2.23(≡)(p2)
5.	$\mathbf{v}[b] = \mathbf{v}[(a \equiv c)]$	MT 2.23(≡)(p3)
6.	$\mathbf{v}[b] = \mathtt{F}$	MT 2.23(≡, ¬)(p4, p3)
7.	$\mathbf{v}[a] \neq \mathbf{v}[c]$	MT 2.23(≡)(p6, p5)
8.	$\mathbf{v}[c] = \mathtt{F}$	(p7, p3)

Con Γ_1

0.	$(\exists \mathbf{v}, \mid \mathbf{v}$ satisface $\Gamma_1)$	
1.	$\mathbf{v}[(a \equiv (\neg b))] = \mathtt{T}$	Def.(p0)
2.	$\mathbf{v}[(b \equiv (a \equiv c))] = \mathtt{T}$	Def.(p0)
3.	$\mathbf{v}[(\neg a)] = \mathtt{T}$	Def.(p0)
4.	$\mathbf{v}[b] = \mathtt{T}$	MT 2.23(≡, ¬)(p3, p1)
5.	$\mathbf{v}[a] = \mathbf{v}[c]$	MT 2.23(≡)(p4, p2)
6.	$\mathbf{v}[c] = \mathtt{F}$	MT 2.23(¬)(p5, p3)

4. Punto 4

Punto 4, (A, B, C)

A dice: "B y C son de la misma naturaleza"
$\Gamma_0 = \{(a \equiv (b \equiv c)), a, b\}$
$\Gamma_1 = \{(a \equiv (b \equiv c)), a, (\neg b)\}$
$\Gamma_2 = \{(a \equiv (b \equiv c)), (\neg a), b\}$
$\Gamma_0 = \{(a \equiv (b \equiv c)), (\neg a), (\neg b)\}$

C responderá "sí"

Con Γ_0

0. $(\exists \mathbf{v} \mid \mathbf{v}$ satisface $\Gamma_0)$
1. $\mathbf{v}[(a \equiv (b \equiv c))] = \mathtt{T}$ — Def.(p0)
2. $\mathbf{v}[a] = \mathtt{T}$ — Def.(p0)
3. $\mathbf{v}[b] = \mathtt{T}$ — Def.(p0)
4. $\mathbf{v}[c] = \mathtt{T}$ — MT 2.23($\equiv$)(p3, p2, p1)
5. C respondería sí

Con Γ_1

0. $(\exists \mathbf{v} \mid \mathbf{v}$ satisface $\Gamma_1)$
1. $\mathbf{v}[(a \equiv (b \equiv c))] = \mathtt{T}$ — Def.(p0)
2. $\mathbf{v}[a] = \mathtt{T}$ — Def.(p0)
3. $\mathbf{v}[(\neg b)] = \mathtt{T}$ — Def.(p0)
4. $\mathbf{v}[c] = \mathtt{F}$ — MT 2.23($\equiv$, $\neg$)(p3, p2, p1)
5. C respondería sí

Con Γ_2

0. $(\exists \mathbf{v} \mid \mathbf{v}$ satisface $\Gamma_0)$
1. $\mathbf{v}[(a \equiv (b \equiv c))] = \mathtt{T}$ — Def.(p0)
2. $\mathbf{v}[(\neg a)] = \mathtt{T}$ — Def.(p0)
3. $\mathbf{v}[b] = \mathtt{T}$ — Def.(p0)
4. $\mathbf{v}[c] = \mathtt{F}$ — MT 2.23($\equiv$, $\neg$)(p3, p2, p1)
5. C respondería sí

Con Γ_3

0. $(\exists \mathbf{v} \mid \mathbf{v}$ satisface $\Gamma_0)$
1. $\mathbf{v}[(a \equiv (b \equiv c))] = \mathtt{T}$ — Def.(p0)
2. $\mathbf{v}[(\neg a)] = \mathtt{T}$ — Def.(p0)
3. $\mathbf{v}[(\neg b)] = \mathtt{T}$ — Def.(p0)
4. $\mathbf{v}[c] = \mathtt{T}$ — MT 2.23($\equiv$, $\neg$)(p3, p2, p1)
5. C respondería sí

5. Punto 5

El habitante A dice "Yo dije que si no soy caballero entonces soy escudero, y si soy caballero entonces no soy escudero"