$\forall x \; \exists y \, Lxy$

x

$\Rightarrow \phi \, Lx$

$\mathcal{M} = \langle D, I, g, \{0,1\} \rangle$

$D = \{d_1, d_2\}$

$I: \quad I(L) = \{\langle d_1, d_1 \rangle, \langle d_2, d_1 \rangle\}$

$g: \{\langle x, d_1 \rangle, \langle y, d_1 \rangle\} \; \{\langle x, d_2 \rangle, \langle y, d_1 \rangle\}$

for d_1

$\| \exists y \, Lxy \|^{g[x \to d_1]} \stackrel{?}{=} 1$ ✓

$\| Lxy \|^{g[x \to d_1][y \to ?]} \stackrel{?}{=} 1$

try d_1

$\| Lxy \|^{g[x \to d_1][y \to d_1]} \stackrel{?}{=} 1$

$\langle \|x\|, \|y\| \rangle \stackrel{?}{\in} I(L)$

$\langle d_1, d_1 \rangle \in I(L)$

yes ✓

for d_2 $\| \exists y \, Lxy \|^{g[x \to d_2]}$

$\| Lxy \|^{g[x \to d_2][y \to d_1]} \stackrel{?}{=} 1$

$\langle \|x\|, \|y\| \rangle \stackrel{?}{\in} I(L)$

$\langle d_2, d_1 \rangle \stackrel{?}{\in} I(L)$

yes ✓

$\forall x \exists y [xy = 1]$

$\mathcal{M} = \{\langle d_1, d_1\rangle, \langle d_2, d_1\rangle\}$

$g = \{\langle x, d_2\rangle, \langle y, d_2\rangle\}$

for d_2 ✓

$\| \exists y [xy] \|^{g[x \to d_2]}$

for d_2 ✗

$\| [xy] \|^{g[x \to d_2][y \to d_2]}$

$\langle \|x\|, \|y\| \rangle \overset{?}{\in} I([])$

$\langle d_2, d_2 \rangle \overset{?}{\in} I([])$

no

for d_1 ✓

$\| [xy] \|^{g[x \to d_2][y \to d_1]}$

$\langle d_2, d_1 \rangle \overset{?}{\in} I([])$

yes

// ✓

for d_1

$\| \exists y [xy] \|^{g[x \to d_1]} \overset{?}{=} 1$

for d_2 ✗

$\| [xy] \|^{g[x \to d_1][y \to d_2]} \overset{?}{=} 1$

$\langle d_1, d_2 \rangle \overset{?}{\in} I([])$

no

for d_1 ✓

$\| [xy] \|^{g[x \to d_1][y \to d_1]} \overset{?}{=} 1$

$\langle d_1, d_1 \rangle \overset{?}{\in} I([])$

yes

// ✓