

t18_yellow_0
(TMX1BqSSy2qsNh57xsF7mLSSj4Ypnu4NQoj)

October 27, 2020

Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k10_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& \quad X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& \quad (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((r1_lattice3 X0 (k2_tarski \\
& \quad X2 X3) X1) \Rightarrow ((r1_orders_2 X0 X1 X2) \wedge (r1_orders_2 X0 X1 X3))) \wedge (((\\
& \quad (r1_orders_2 X0 X1 X2) \wedge (r1_orders_2 X0 X1 X3)) \Rightarrow (r1_lattice3 X0 \\
& \quad (k2_tarski X2 X3) X1)) \wedge (((r2_lattice3 X0 (k2_tarski X2 X3) X1) \Rightarrow \\
& \quad ((r1_orders_2 X0 X2 X1) \wedge (r1_orders_2 X0 X3 X1))) \wedge (((r1_orders_2 \\
& \quad X0 X2 X1) \wedge (r1_orders_2 X0 X3 X1)) \Rightarrow (r2_lattice3 X0 (k2_tarski X2 \\
& \quad X3) X1)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& \quad (r1_yellow_0 X0 X1) \Leftrightarrow (\exists X2.(m1_subset_1 X2 (u1_struct_0 \\
& \quad X0)) \wedge ((r2_lattice3 X0 X1 X2) \wedge (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& \quad X0)) \Rightarrow ((r2_lattice3 X0 X1 X3) \Rightarrow (r1_orders_2 X0 X2 X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((l1_orders_2 X0) \wedge ((m1_subset_1 \\
& \quad X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 \\
& \quad (k10_lattice3 X0 X1 X2) (u1_struct_0 X0))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow ((v5_orders_2 X0) \Rightarrow (\forall X1.(\\
& m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
& (u1_struct_0 X0)) \Rightarrow ((\exists X3.(m1_subset_1 X3 (u1_struct_0 \\
& X0)) \wedge ((r1_orders_2 X0 X1 X3) \wedge ((r1_orders_2 X0 X2 X3) \wedge (\forall X4. \\
& (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (((r1_orders_2 X0 X1 X4) \wedge (r1_orders_2 \\
& X0 X2 X4)) \Rightarrow (r1_orders_2 X0 X3 X4)))))) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow ((X3 = k10_lattice3 X0 X1 X2) \Leftrightarrow ((r1_orders_2 \\
& X0 X1 X3) \wedge ((r1_orders_2 X0 X2 X3) \wedge (\forall X4.(m1_subset_1 X4 (\\
& u1_struct_0 X0)) \Rightarrow (((r1_orders_2 X0 X1 X4) \wedge (r1_orders_2 X0 X2 X4)) \Rightarrow \\
& (r1_orders_2 X0 X3 X4))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.k2_tarSKI X0 X1 = k2_tarSKI X1 X0 \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\
& (((X3 = k10_lattice3 X0 X1 X2) \wedge (r1_yellow_0 X0 (k2_tarSKI X1 X2))) \Rightarrow \\
& ((r1_orders_2 X0 X1 X3) \wedge ((r1_orders_2 X0 X2 X3) \wedge (\forall X4.(m1_subset_1 \\
& X4 (u1_struct_0 X0)) \Rightarrow (((r1_orders_2 X0 X1 X4) \wedge (r1_orders_2 X0 \\
& X2 X4)) \Rightarrow (r1_orders_2 X0 X3 X4)))))) \wedge (((r1_orders_2 X0 X1 X3) \wedge \\
& (r1_orders_2 X0 X2 X3) \wedge (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X0)) \Rightarrow (((r1_orders_2 X0 X1 X4) \wedge (r1_orders_2 X0 X2 X4)) \Rightarrow (r1_orders_2 \\
& X0 X3 X4)))))) \Rightarrow ((X3 = k10_lattice3 X0 X1 X2) \wedge (r1_yellow_0 X0 (k2_tarSKI \\
& X1 X2))))))
\end{aligned}$$