

t8_yellow_1

(TMbp1ii5yAybTwGNTMUKnHjNyeGRy6Rur6P)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $k1_yellow_1 : \iota \Rightarrow \iota$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ 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 $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X2 X1)) \Rightarrow (r1_tarski (k2_xboole_0 X0 X2) X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 (k2_xboole_0 X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ (k2_yellow_1 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ (k2_yellow_1 X0))) \Rightarrow ((r3_orders_2 (k2_yellow_1 X0) X1 X2) \Leftrightarrow (r1_tarski \\ X1 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (u1_struct_0 (k2_yellow_1 X0) = X0) \wedge (u1_orders_2 (k2_yellow_1 X0) = k1_yellow_1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\
& (((X3 = k10_lattice3 X0 X1 X2) \wedge (r1_yellow_0 X0 (k2_tarski X1 X2))) \Rightarrow \\
& ((r1_orders_2 X0 X1 X3) \wedge ((r1_orders_2 X0 X2 X3) \wedge (\forall X4.(m1_subset_1 \\
& X4 (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 X1 X4) \wedge (r1_orders_2 X0 \\
& X2 X4)) \Rightarrow (r1_orders_2 X0 X3 X4)))))) \wedge (((r1_orders_2 X0 X1 X3) \wedge \\
& (r1_orders_2 X0 X2 X3) \wedge (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X0)) \Rightarrow ((r1_orders_2 X0 X1 X4) \wedge (r1_orders_2 X0 X2 X4)) \Rightarrow (r1_orders_2 \\
& X0 X3 X4)))))) \Rightarrow ((X3 = k10_lattice3 X0 X1 X2) \wedge (r1_yellow_0 X0 (k2_tarski \\
& X1 X2))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v3_orders_2 \\
& X0) \wedge (l1_orders_2 X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\
& m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\
& X0 X1 X2))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((\neg v2_struct_0 (k2_yellow_1 X0)) \wedge \\
& (v1_orders_2 (k2_yellow_1 X0)))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (v1_orders_2 (k2_yellow_1 X0)) \wedge ((v3_orders_2 (k2_yellow_1 \\
& X0)) \wedge ((v4_orders_2 (k2_yellow_1 X0)) \wedge (v5_orders_2 (k2_yellow_1 \\
& X0))))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (v1_orders_2 (k2_yellow_1 X0)) \wedge (l1_orders_2 (k2_yellow_1 \\
& X0))
\end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0. k2_yellow_1 X0 = g1_orders_2 X0 (k1_yellow_1 X0)
\end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0
\end{aligned} \tag{12}$$

Theorem 1

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\
& (k2_yellow_1 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\
& (k2_yellow_1 X0))) \Rightarrow ((k2_xboole_0 X1 X2 \in X0) \Rightarrow (k10_lattice3 (k2_yellow_1 \\
& X0) X1 X2 = k2_xboole_0 X1 X2))))
\end{aligned}$$