

t14_yellow_1 (TM-
LUr8SCu8vGFUqwWxWeQHAsvjXGRoF5s4Z)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k4_yellow_0 : \iota \Rightarrow \iota$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ 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 $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $k2_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $k1_yellow_1 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (r1_tarski X0 (k3_tarski X1)) \quad (1)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((r2_lattice3 X0 k1_xboole_0 X1) \wedge (r1_lattice3 X0 k1_xboole_0 X1))) \quad (2)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(((X1 = k2_yellow_0 \\ & X0 X2) \wedge (r2_yellow_0 X0 X2)) \Rightarrow ((r1_lattice3 X0 X2 X1) \wedge (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r1_lattice3 X0 X2 X3) \Rightarrow (r1_orders_2 \\ & X0 X3 X1)))))) \wedge (((r1_lattice3 X0 X2 X1) \wedge (\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow ((r1_lattice3 X0 X2 X3) \Rightarrow (r1_orders_2 X0 X3 \\ & X1)))) \Rightarrow ((X1 = k2_yellow_0 X0 X2) \wedge (r2_yellow_0 X0 X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (5)$$

Assume the following.

$$\forall X0. (u1_struct_0 (k2_yellow_1 X0) = X0) \wedge (u1_orders_2 (k2_yellow_1 X0) = k1_yellow_1 X0) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\ & X0 X1 X2)) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((\neg v2_struct_0 (k2_yellow_1 X0)) \wedge (v1_orders_2 (k2_yellow_1 X0))) \quad (9)$$

Assume the following.

$$\forall X0. (v1_orders_2 (k2_yellow_1 X0) \wedge ((v3_orders_2 (k2_yellow_1 X0) \wedge (v4_orders_2 (k2_yellow_1 X0)) \wedge (v5_orders_2 (k2_yellow_1 X0)))) \quad (10)$$

Assume the following.

$$\forall X0. (v1_orders_2 (k2_yellow_1 X0) \wedge (l1_orders_2 (k2_yellow_1 X0))) \quad (11)$$

Assume the following.

$$k1_xboole_0 = the (\lambda X0 : \iota. v1_xboole_0 X0) \quad (12)$$

Assume the following.

$$\forall X0. k2_yellow_1 X0 = g1_orders_2 X0 (k1_yellow_1 X0) \quad (13)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (k4_yellow_0 X0 = k2_yellow_0 X0 k1_xboole_0) \quad (14)$$

Theorem 1

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((k3_tarski X0 \in X0) \Rightarrow (k4_yellow_0 (k2_yellow_1 X0) = k3_tarski X0))$$