

t17_yellow_1 (TMaYkU- UMwDFK8nUeTvTov8yWTofCs1pZqRt)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_yellow_1 : \iota \Rightarrow \iota$ be given. Let $k13_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $k11_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v3_lattices : \iota \Rightarrow o$ be given. Let $k1_lattice3 : \iota \Rightarrow \iota$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $k3_lattice3 : \iota \Rightarrow \iota$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_yellow_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ (k2_yellow_1 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ (k2_yellow_1 X0))) \Rightarrow ((k3_xboole_0 X1 X2 \in X0) \Rightarrow (k11_lattice3 (k2_yellow_1 \\ X0) X1 X2 = k3_xboole_0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ (k2_yellow_1 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ (k2_yellow_1 X0))) \Rightarrow ((k2_xboole_0 X1 X2 \in X0) \Rightarrow (k10_lattice3 (k2_yellow_1 \\ X0) X1 X2 = k2_xboole_0 X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (3)$$

Assume the following.

$$\forall X0. k3_yellow_1 X0 = k2_yellow_1 (k9_setfam_1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v5_orders_2 X0) \wedge ((v1_lattice3 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k13_lattice3 X0 X1 X2 = k10_lattice3 \\ & X0 X1 X2) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v5_orders_2 X0) \wedge ((v2_lattice3 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k12_lattice3 X0 X1 X2 = k11_lattice3 \\ & X0 X1 X2) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (u1_struct_0 (k3_yellow_1 \\ & X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k3_yellow_1 \\ & X0))) \Rightarrow ((k3_xboole_0 X1 X2 \in k9_setfam_1 X0) \wedge (k2_xboole_0 X1 X2 \in \\ & k9_setfam_1 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_orders_2 (k2_yellow_1 X0)) \wedge ((v3_orders_2 (k2_yellow_1 \\ & X0)) \wedge ((v4_orders_2 (k2_yellow_1 X0)) \wedge (v5_orders_2 (k2_yellow_1 \\ & X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v3_lattices (k1_lattice3 X0)) \wedge (v10_lattices (k1_lattice3 \\ & X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ & X0))) \Rightarrow ((v1_orders_2 (k3_lattice3 X0)) \wedge ((v3_orders_2 (k3_lattice3 \\ & X0)) \wedge ((v4_orders_2 (k3_lattice3 X0)) \wedge ((v5_orders_2 (k3_lattice3 \\ & X0)) \wedge ((v1_lattice3 (k3_lattice3 X0)) \wedge (v2_lattice3 (k3_lattice3 \\ & X0)))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v2_struct_0 (k1_lattice3 X0)) \wedge (v3_lattices (k1_lattice3 \\ & X0)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_orders_2 (k2_yellow_1 X0)) \wedge (l1_orders_2 (k2_yellow_1 \\ & X0)) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(v3_lattices (k1_lattice3 X0)) \wedge (l3_lattices (k1_lattice3 X0)) \quad (13)$$

Assume the following.

$$\forall X0.k3_yellow_1 X0 = k3_lattice3 (k1_lattice3 X0) \quad (14)$$

Assume the following.

$$\forall X0.k2_yellow_1 X0 = g1_orders_2 X0 (k1_yellow_1 X0) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (u1_struct_0 (k3_yellow_1 \\ & X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k3_yellow_1 \\ & X0))) \Rightarrow ((k13_lattice3 (k3_yellow_1 X0) X1 X2 = k2_xboole_0 X1 X2) \wedge \\ & (k12_lattice3 (k3_yellow_1 X0) X1 X2 = k3_xboole_0 X1 X2))) \end{aligned}$$