

t44_waybel_7
(TMJAdhvKfyjw17ZW2R51jWdMj89sQSSx51z)

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Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v3_waybel_3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v5_waybel_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel_4 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v4_waybel_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_waybel_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v5_waybel_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (k2_yellow_0 X0 (k7_domain_1 (u1_struct_0 X0) X1 X2) = k12_lattice3 \\ & X0 X1 X2))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_waybel_3 X0) \wedge \\ & (l1_orders_2 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow ((v4_waybel_7 X1 X0) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((\\ & v1_finset_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow \\ & (\neg (r1_waybel_3 X0 (k2_yellow_0 X0 X2) X1) \wedge (\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow (\neg (X3 \in X2) \wedge (r3_orders_2 X0 X3 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v5_waybel_6 \\ & X1 X0) \Rightarrow (v4_waybel_7 X1 X0))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(k7_domain_1 X0 X1 X2 = k2_tarski X1 X2) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((v3_orders_2 X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_yellow_0 X0)\wedge((v1_lattice3 X0)\wedge((v2_lattice3 X0)\wedge \\ ((v3_waybel_3 X0)\wedge(l1_orders_2 X0))))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\neg(v5_waybel_7 (k1_waybel_4 X0) X0)\wedge((\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(\neg(r1_waybel_3 X0 (k12_lattice3 X0 X2 X3) X1)\wedge \\ ((\neg r3_orders_2 X0 X2 X1)\wedge(\neg r3_orders_2 X0 X3 X1))))))\wedge(\neg v5_waybel_6 X1 X0)))) \quad (5) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.\neg v1_xboole_0 (k2_tarski X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1_finset_1 (k2_tarski X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(l1_struct_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(m1_subset_1 (k7_domain_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_tarski X0 X1)\Leftrightarrow(\forall X3. (X3 \in X2)\Leftrightarrow((X3 = X0)\vee(X3 = X1))) \quad (11)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v1_lattice3 X0)\Rightarrow(\neg v2_struct_0 X0)) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_waybel_3 X0) \wedge (l1_orders_2 X0))))))) \Rightarrow ((v5_waybel_7 (k1_waybel_4 \\ & X0) X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v4_waybel_7 \\ & X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \neg(r1_waybel_3 X0 (k12_lattice3 \\ & X0 X2 X3) X1) \wedge (\neg r3_orders_2 X0 X2 X1) \wedge (\neg r3_orders_2 X0 X3 X1))))))) \end{aligned}$$