

t10_waybel35 (TMLebFwBKCN- FuL5ZmoPCuvWBjw8R9QNJJn3)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. 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 $v3_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_waybel_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_waybel_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_waybel35 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_waybel35 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v1_waybel_4 \\ & X1 X0) \wedge ((v2_waybel_4 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 \\ & X2) \wedge (m1_waybel35 X2 X0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & X2)) \Rightarrow (((r1_yellow_0 X0 X3) \wedge (v2_waybel35 X2 X0 X1)) \Rightarrow (r1_yellow_0 \\ & (k5_yellow_0 X0 X2) X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (r1_yellow_0 \\ & X0 X1)) \Rightarrow (v3_lattice3 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge ((v3_lattice3 \\ & X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(r1_yellow_0 X0 X1) \wedge (r2_yellow_0 \\ & X0 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\wedge \\ & ((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))))\Rightarrow((\neg v2_struct_0 (k5_yellow_0 X0 X1))\wedge((v1_orders_2 (\\ & k5_yellow_0 X0 X1))\wedge(v4_yellow_0 (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(m1_yellow_0 X1 X0)\Rightarrow(l1_orders_2 X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((l1_struct_0 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))\Rightarrow(\forall X2. \\ & (m1_waybel35 X2 X0 X1)\Rightarrow(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(l1_struct_0 X0) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((l1_orders_2 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))))\Rightarrow((v1_orders_2 (k5_yellow_0 X0 X1))\wedge((v4_yellow_0 \\ & (k5_yellow_0 X0 X1) X0)\wedge(m1_yellow_0 (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))\Rightarrow(\forall X2.((v1_orders_2 X2)\wedge((v4_yellow_0 \\ & X2 X0)\wedge(m1_yellow_0 X2 X0)))\Rightarrow((X2 = k5_yellow_0 X0 X1)\Leftrightarrow(u1_struct_0 \\ & X2 = X1)))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge((v4_orders_2 \\ & X0)\wedge((v5_orders_2 X0)\wedge((v3_lattice3 X0)\wedge(l1_orders_2 X0))))))\Rightarrow \\ & (\forall X1.((v1_waybel_4 X1 X0)\wedge((v2_waybel_4 X1 X0)\wedge(m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))))\Rightarrow \\ & (\forall X2.((\neg v1_xboole_0 X2)\wedge(m1_waybel35 X2 X0 X1))\Rightarrow((v2_waybel35 \\ & X2 X0 X1)\Rightarrow(v3_lattice3 (k5_yellow_0 X0 X2)))) \end{aligned}$$