

t13_waybel_3

(TMXo1Qtc6a16X5pxTxkUWySjWSRnUu1Qh1C)

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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 $v16_waybel_0 : \iota \Rightarrow o$ be given. Let $v24_waybel_0 : \iota \Rightarrow o$ 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 $r2_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_waybel_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge (l1_orders_2 X0)))) \Rightarrow ((v24_waybel_0 X0) \Leftrightarrow (\forall X1. ((\neg \\ v1_xboole_0 X1) \wedge ((v1_waybel_0 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))))) \Rightarrow (r1_yellow_0 X0 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\ (((r1_orders_2 X0 X1 X2) \wedge (r1_orders_2 X0 X2 X3)) \Rightarrow (r1_orders_2 \\ X0 X1 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ (u1_struct_0 X0)) \Rightarrow (((r1_orders_2 X0 X1 X2) \wedge (r1_orders_2 X0 X2 \\ X1)) \Rightarrow (X1 = X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v3_orders_2 \\ & X0)\wedge(l1_orders_2 X0)))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(\\ & m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow((r3_orders_2 X0 X1 X2)\Leftrightarrow(r1_orders_2 \\ & X0 X1 X2)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(l1_orders_2 X0)\Rightarrow(m1_subset_1 (k1_yellow_0 X0 X1) (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0))\Rightarrow((r1_yellow_0 X0 X1)\Rightarrow((X2 = k1_yellow_0 X0 \\ & X1)\Leftrightarrow((r2_lattice3 X0 X1 X2)\wedge(\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0))\Rightarrow((r2_lattice3 X0 X1 X3)\Rightarrow(r1_orders_2 X0 X2 X3)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0))\Rightarrow((r2_lattice3 X0 X1 X2)\Leftrightarrow(\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0))\Rightarrow((X3 \in X1)\Rightarrow(r1_orders_2 X0 X3 X2)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((r2_orders_2 \\ & X0 X1 X2)\Leftrightarrow((r1_orders_2 X0 X1 X2)\wedge(X1\neq X2)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow((v16_waybel_0 \\ & X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((r1_orders_2 X0 X1 X2)\vee(r1_orders_2 \\ & X0 X2 X1)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge(l1_orders_2 \\ & X0)))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((r1_waybel_3 X0 X1 X2)\Leftrightarrow(\forall X3. \\ & ((\neg v1_xboole_0 X3)\wedge((v1_waybel_0 X3 X0)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X0))))\Rightarrow(\neg(r3_orders_2 X0 X2 (k1_yellow_0 X0 X3))\wedge \\ & (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow(\neg(X4 \in X3)\wedge(r3_orders_2 \\ & X0 X1 X4)))))))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge (v3_orders_2 X0) \wedge ((v4_orders_2 \\ X0) \wedge (&(v5_orders_2 X0) \wedge ((v16_waybel_0 X0) \wedge ((v24_waybel_0 X0) \wedge \\ &(l1_orders_2 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r2_orders_2 \\ X0 X1 X2) \Rightarrow (r1_waybel_3 X0 X1 X2)))) \end{aligned}$$