

t21_waybel_3
(TMZqjPyckN5qnBL2viwDPr7SyNEdQjxSbtj)

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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 $v24_waybel_0 : \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v12_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $r1_waybel_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow ((r1_yellow_0 X0 X1) \Rightarrow (k1_yellow_0 X0 X1 = k1_yellow_0 \\ X0 (k3_waybel_0 X0 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 \\ X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\ X0 X1 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge \\ (l1_orders_2 X0))) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))))) \Rightarrow (\neg v1_xboole_0 (k3_waybel_0 X0 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge \\ (v4_orders_2 X0)\wedge(l1_orders_2 X0))))\wedge((v1_waybel_0 X1 X0)\wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(v1_waybel_0 \\ (k3_waybel_0 X0 X1) X0) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v4_orders_2 X0)\wedge \\ (l1_orders_2 X0))))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0)))\Rightarrow(v12_waybel_0 (k3_waybel_0 X0 X1) X0) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((l1_orders_2 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))))\Rightarrow(m1_subset_1 (k3_waybel_0 X0 X1) (k1_zfmisc_1 \\ (u1_struct_0 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge(l1_orders_2 \\ X0)))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((r1_waybel_3 X0 X1 X2)\Leftrightarrow(\forall X3. \\ ((\neg v1_xboole_0 X3)\wedge((v1_waybel_0 X3 X0)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ (u1_struct_0 X0))))\Rightarrow(\neg(r3_orders_2 X0 X2 (k1_yellow_0 X0 X3))\wedge \\ (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow(\neg(X4 \in X3)\wedge(r3_orders_2 \\ X0 X1 X4)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X0))\Rightarrow((X2 = k3_waybel_0 X0 X1)\Leftrightarrow(\forall X3.(m1_subset_1 \\ X3 (u1_struct_0 X0))\Rightarrow((X3 \in X2)\Leftrightarrow(\exists X4.(m1_subset_1 X4 (u1_struct_0 \\ X0))\wedge((r1_orders_2 X0 X3 X4)\wedge(X4 \in X1)))))))))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge((v4_orders_2 \\ X0)\wedge((v5_orders_2 X0)\wedge((v24_waybel_0 X0)\wedge(l1_orders_2 X0))))))\Rightarrow \\ (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 \\ X2 (u1_struct_0 X0))\Rightarrow((\forall X3.((\neg v1_xboole_0 X3)\wedge((v1_waybel_0 \\ X3 X0)\wedge((v12_waybel_0 X3 X0)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ X0))))))\Rightarrow((r3_orders_2 X0 X2 (k1_yellow_0 X0 X3))\Rightarrow(X1 \in X3))\Rightarrow \\ (r1_waybel_3 X0 X1 X2)))))) \end{aligned}$$