

t3_waybel33

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_yellow_6 : \iota \Rightarrow \iota$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v6_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_waybel_0 : \iota \Rightarrow o$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $g1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k1_yellow_6 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & ((\neg v1_xboole_0 X1) \wedge (\neg v1_xboole_0 X3) \wedge ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 X0 X1) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \wedge ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 X2 X3) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X3)))))) \Rightarrow ((r1_funct_2 X0 X1 X2 X3 X4 X5) \Leftrightarrow (X4 = X5)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_struct_0 X1)) \Rightarrow ((u1_struct_0 X0 = u1_struct_0 X1) \Rightarrow (\forall X2. ((\neg v2_struct_0 X2) \wedge ((v4_orders_2 X2) \wedge ((v6_waybel_0 X2 X0) \wedge ((v7_waybel_0 X2) \wedge (l1_waybel_0 X2 X0)))))) \Rightarrow ((\neg v2_struct_0 X2) \wedge ((v4_orders_2 X2) \wedge ((v6_waybel_0 X2 X1) \wedge ((v7_waybel_0 X2) \wedge (l1_waybel_0 X2 X1))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((l1_struct_0 X0)\wedge \\ & ((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X1)))\wedge((v1_funct_1 \\ & X3)\wedge((v1_funct_2 X3 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X1 (u1_struct_0 X0))))))))\Rightarrow(\forall X4.\forall X5. \\ & \forall X6.\forall X7.(g1_waybel_0 X0 X1 X2 X3 = g1_waybel_0 X4 X5 \\ & X6 X7)\Rightarrow((X0 = X4)\wedge((X1 = X5)\wedge((X2 = X6)\wedge(X3 = X7)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_struct_0 X0)\wedge(l1_waybel_0 X1 X0))\Rightarrow \\ & ((v1_funct_1 (u1_waybel_0 X0 X1))\wedge((v1_funct_2 (u1_waybel_0 \\ & X0 X1) (u1_struct_0 X1) (u1_struct_0 X0))\wedge(m1_subset_1 (u1_waybel_0 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 \\ & X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(m1_subset_1 (u1_orders_2 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \quad (6)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(\forall X1.(l1_waybel_0 X1 X0)\Rightarrow (l1_orders_2 X1)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\forall X1. \\ & (X1 = k6_yellow_6 X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(\exists X3.((\neg v2_struct_0 \\ & X3)\wedge((v4_orders_2 X3)\wedge((v6_waybel_0 X3 X0)\wedge((v7_waybel_0 X3)\wedge \\ & (l1_waybel_0 X3 X0))))))\wedge((X3 = X2)\wedge(u1_struct_0 X3 \in k1_yellow_6 \\ & (u1_struct_0 X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_struct_0 X0)\wedge(l1_waybel_0 X1 X0))\Rightarrow \\ & ((v6_waybel_0 X1 X0)\Rightarrow(X1 = g1_waybel_0 X0 (u1_struct_0 X1) (u1_orders_2 \\ & X1) (u1_waybel_0 X0 X1))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_struct_0 X1)) \Rightarrow ((u1_struct_0 X0 = u1_struct_0 \\ & X1) \Rightarrow (\forall X2.(l1_waybel_0 X2 X0) \Rightarrow (\neg(X2 \in k6_yellow_6 X0) \wedge (\\ & \forall X3.((\neg v2_struct_0 X3) \wedge ((v4_orders_2 X3) \wedge ((v6_waybel_0 \\ X3 X1) \wedge ((v7_waybel_0 X3) \wedge (l1_waybel_0 X3 X1)))))) \Rightarrow (\neg(X3 \in k6_yellow_6 \\ X1) \wedge ((g1_orders_2 (u1_struct_0 X2) (u1_orders_2 X2) = g1_orders_2 \\ (u1_struct_0 X3) (u1_orders_2 X3)) \wedge (r1_funct_2 (u1_struct_0 \\ X2) (u1_struct_0 X0) (u1_struct_0 X3) (u1_struct_0 X1) (u1_waybel_0 \\ X0 X2) (u1_waybel_0 X1 X3)))))))))) \end{aligned}$$