

t7_waybel33
(TMQJ4JJaqr7fKVZTG5DcEAQbyzx8QNfT6b)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $r1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow ((\\
& g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 \\
& X1) (u1_orders_2 X1)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\
& (m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow (\forall X5.(m1_subset_1 X5 \\
& (u1_struct_0 X1)) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (((r1_orders_2 X0 X2 X3) \Rightarrow \\
& (r1_orders_2 X1 X4 X5)) \wedge ((r2_orders_2 X0 X2 X3) \Rightarrow (r2_orders_2 X1 \\
& X4 X5))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\
& ((\neg v1_xboole_0 X1) \wedge (\neg v1_xboole_0 X3) \wedge (((v1_funct_1 X4) \wedge ((\\
& v1_funct_2 X4 X0 X1) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))))) \wedge ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 X2 X3) \wedge (m1_subset_1 \\
& X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X3)))))) \Rightarrow ((r1_funct_2 X0 X1 \\
& X2 X3 X4 X5) \Leftrightarrow (X4 = X5))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0)))\Rightarrow(\forall X2.\forall X3.(g1_orders_2 X0 X1 = g1_orders_2 \\ & X2 X3)\Rightarrow((X0 = X2)\wedge(X1 = X3))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 \\ & (u1_struct_0 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_struct_0 X0)\wedge(l1_waybel_0 X1 X0))\Rightarrow \\ & ((v1_funct_1 (u1_waybel_0 X0 X1))\wedge((v1_funct_2 (u1_waybel_0 \\ & X0 X1) (u1_struct_0 X1) (u1_struct_0 X0))\wedge(m1_subset_1 (u1_waybel_0 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 \\ & X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0)\Rightarrow(m1_subset_1 (u1_orders_2 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_struct_0 X0)\Rightarrow(\forall X1.(l1_waybel_0 X1 X0)\Rightarrow \\ & (l1_orders_2 X1)) \end{aligned} \quad (8)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\forall X1. \\ & ((\neg v2_struct_0 X1)\wedge(l1_waybel_0 X1 X0))\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X1))\Rightarrow(k2_waybel_0 X0 X1 X2 = k3_funct_2 (u1_struct_0 \\ & X1) (u1_struct_0 X0) (u1_waybel_0 X0 X1) X2))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (l1_waybel_0 X1 X0)) \Rightarrow (\forall X2.(r1_waybel_0 \\
& X0 X1 X2) \Leftrightarrow (\exists X3.(m1_subset_1 X3 (u1_struct_0 X1)) \wedge (\forall X4. \\
& (m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow ((r1_orders_2 X1 X3 X4) \Rightarrow (k2_waybel_0 \\
& X0 X1 X4 \in X2))))))
\end{aligned} \tag{11}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (l1_struct_0 X1)) \Rightarrow (\forall X2.((\neg v2_struct_0 \\
& X2) \wedge (l1_waybel_0 X2 X0)) \Rightarrow (\forall X3.((\neg v2_struct_0 X3) \wedge (l1_waybel_0 \\
& X3 X1)) \Rightarrow (((g1_orders_2 (u1_struct_0 X2) (u1_orders_2 X2) = g1_orders_2 \\
& (u1_struct_0 X3) (u1_orders_2 X3)) \wedge (r1_funct_2 (u1_struct_0 \\
& X2) (u1_struct_0 X0) (u1_struct_0 X3) (u1_struct_0 X1) (u1_waybel_0 \\
& X0 X2) (u1_waybel_0 X1 X3))) \Rightarrow (\forall X4.(r1_waybel_0 X0 X2 X4) \Rightarrow \\
& (r1_waybel_0 X1 X3 X4))))))
\end{aligned}$$