

l24_waybel25 (TMQzMKqqWHmpCpp- TiVS94Khtsnn3xozLc2p)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ 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 $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v6_waybel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v11_quantal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow (\forall X2. \\
& ((\neg v2_struct_0 X2) \wedge (l1_orders_2 X2)) \Rightarrow (\forall X3. ((\neg v2_struct_0 \\
& X3) \wedge (l1_orders_2 X3)) \Rightarrow (\forall X4. ((v1_funct_1 X4) \wedge ((v1_funct_2 \\
& X4 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X5. \\
& ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 (u1_struct_0 X2) (u1_struct_0 \\
& X3)) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X2) (u1_struct_0 X3)))))) \Rightarrow (((g1_orders_2 (u1_struct_0 X0) (u1_orders_2 \\
& X0) = g1_orders_2 (u1_struct_0 X2) (u1_orders_2 X2)) \wedge ((g1_orders_2 \\
& (u1_struct_0 X1) (u1_orders_2 X1) = g1_orders_2 (u1_struct_0 X3) \\
& (u1_orders_2 X3)) \wedge ((X4 = X5) \wedge (v5_orders_3 X4 X0 X1)))) \Rightarrow (v5_orders_3 \\
& X5 X2 X3))))))
\end{aligned} \tag{1}$$

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.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \tag{3}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\ & X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0)))))) \Rightarrow ((v6_waybel_1 X1 X0) \Leftrightarrow ((v11_quantal1 \\ & X1) \wedge (v5_orders_3 X1 X0 X0)))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X0)) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow \\ & (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) \\ & (u1_struct_0 X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X1) (u1_struct_0 X1)))))) \Rightarrow (((g1_orders_2 (u1_struct_0 \\ & X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 X1) (u1_orders_2 \\ & X1)) \wedge ((r1_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\ & X1) (u1_struct_0 X1) X2 X3) \wedge (v6_waybel_1 X2 X0))) \Rightarrow (v6_waybel_1 \\ & X3 X1)))) \end{aligned}$$