

t15_waybel34 (TMaR-
wCPT7EXJCY7ZL67iq9ehU4pDzb1HAtH)

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Let $v2_setfam_1 : \iota \Rightarrow o$ 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 $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ 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 $k5_waybel34 : \iota \Rightarrow \iota$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v3_lattice3 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_altcat_1 : \iota \Rightarrow o$ be given. Let $v6_altcat_1 : \iota \Rightarrow o$ be given. Let $v11_altcat_1 : \iota \Rightarrow o$ be given. Let $v12_altcat_1 : \iota \Rightarrow o$ be given. Let $v2_yellow21 : \iota \Rightarrow o$ be given. Let $l2_altcat_1 : \iota \Rightarrow o$ 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 $k3_yellow21 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_altcat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v18_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. (\neg v2_setfam_1 X0) \Rightarrow (\exists X1. (m1_subset_1 X1 X0) \wedge (\neg v1_xboole_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((\neg v2_struct_0 (k5_waybel34 X0)) \wedge ((v2_altcat_1 (k5_waybel34 X0)) \wedge ((v6_altcat_1 (k5_waybel34 X0)) \wedge ((v11_altcat_1 (k5_waybel34 X0)) \wedge ((v12_altcat_1 (k5_waybel34 X0)) \wedge ((v2_yellow21 (k5_waybel34 X0)) \wedge (l2_altcat_1 (k5_waybel34 X0)))))))))) \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((\neg \forall X1.(m1_subset_1 X1 X0) \Rightarrow \\
& (v1_xboole_0 X1)) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_altcat_1 \\
& X1) \wedge ((v6_altcat_1 X1) \wedge ((v11_altcat_1 X1) \wedge ((v12_altcat_1 X1) \wedge \\
& ((v2_yellow21 X1) \wedge (l2_altcat_1 X1)))))) \Rightarrow ((X1 = k5_waybel34 \\
& X0) \Leftrightarrow ((\forall X2.((v3_orders_2 X2) \wedge ((v4_orders_2 X2) \wedge ((v5_orders_2 \\
& X2) \wedge ((v1_lattice3 X2) \wedge ((v2_lattice3 X2) \wedge (l1_orders_2 X2)))))) \Rightarrow \\
& ((m1_subset_1 X2 (u1_struct_0 X1)) \Leftrightarrow ((v1_orders_2 X2) \wedge ((v3_lattice3 \\
& X2) \wedge (u1_struct_0 X2 \in X0)))) \wedge (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X1)) \Rightarrow (\forall X4. \\
& ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 (k3_yellow21 X1 \\
& X2)) (u1_struct_0 (k3_yellow21 X1 X3))) \wedge ((v5_orders_3 X4 (k3_yellow21 \\
& X1 X2) (k3_yellow21 X1 X3)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 (k3_yellow21 X1 X2)) (u1_struct_0 (k3_yellow21 X1 \\
& X3)))))) \Rightarrow ((X4 \in k1_altcat_1 X1 X2 X3) \Leftrightarrow (v18_waybel_0 X4 (k3_yellow21 \\
& X1 X2) (k3_yellow21 X1 X3)))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow \\
& (X1 \in X0))) \wedge ((v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow (v1_xboole_0 \\
& X1)))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v2_setfam_1 X0) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge \\
& ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 \\
& X1) \wedge (l1_orders_2 X1)))))) \Rightarrow ((m1_subset_1 X1 (u1_struct_0 (k5_waybel34 \\
& X0))) \Leftrightarrow ((v1_orders_2 X1) \wedge ((v3_lattice3 X1) \wedge (u1_struct_0 X1 \in \\
& X0))))))
\end{aligned}$$