

t54_waybel_0 (TMUMg- pWq5DTh7VVPoGr5S19bGepMMQh86LS)

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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 $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\
& X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow (((\forall X3.((v1_finset_1 X3) \wedge (m1_subset_1 \\
& X3 (k1_zfmisc_1 X1))) \Rightarrow ((X3 \neq k1_xboole_0) \Rightarrow (r1_yellow_0 X0 X3))) \wedge \\
& ((\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg (X3 \in X2) \wedge (\forall X4. \\
& ((v1_finset_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 X1))) \Rightarrow (\neg (r1_yellow_0 \\
& X0 X4) \wedge (X3 = k1_yellow_0 X0 X4)))))) \wedge (\forall X3.((v1_finset_1 \\
& X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 X1))) \Rightarrow ((X3 \neq k1_xboole_0) \Rightarrow (\\
& k1_yellow_0 X0 X3 \in X2)))))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X0)) \Rightarrow ((r2_lattice3 X0 X1 X3) \Leftrightarrow (r2_lattice3 X0 X2 X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& \forall X2.((r1_yellow_0 X0 X1) \wedge (\forall X3.(m1_subset_1 X3 (\\
& u1_struct_0 X0)) \Rightarrow ((r2_lattice3 X0 X1 X3) \Leftrightarrow (r2_lattice3 X0 X2 X3)))) \Rightarrow \\
& (k1_yellow_0 X0 X1 = k1_yellow_0 X0 X2))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow ((\forall X3.((v1_finset_1 X3) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 X1))) \Rightarrow ((X3 \neq k1_xboole_0) \Rightarrow (r1_yellow_0 X0 X3))) \wedge \\ & ((\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg(X3 \in X2) \wedge (\forall X4. \\ & ((v1_finset_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 X1))) \Rightarrow (\neg(r1_yellow_0 \\ & X0 X4) \wedge (X3 = k1_yellow_0 X0 X4)))))) \wedge ((\forall X3.((v1_finset_1 \\ & X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 X1))) \Rightarrow ((X3 \neq k1_xboole_0) \Rightarrow (\\ & k1_yellow_0 X0 X3 \in X2))) \wedge (r1_yellow_0 X0 X1)))) \Rightarrow (k1_yellow_0 \\ & X0 X2 = k1_yellow_0 X0 X1)))) \end{aligned}$$