

t55_waybel_2 (TM-
bQqHCN3XRCKt1E8M4eNoo8cwvDdPEznV4)

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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 $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v3_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_waybel_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $k12_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_yellow_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_waybel_2 : \iota \Rightarrow \iota$ be given. Let $k3_waybel_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_waybel_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v24_waybel_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v7_waybel_0 : \iota \Rightarrow o$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_yellow_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v25_waybel_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
 & X0) \wedge ((v24_waybel_0 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\
 & ((v2_waybel_2 X0) \Leftrightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
 & (\forall X2. ((\neg v2_struct_0 X2) \wedge ((v7_waybel_0 X2) \wedge (l1_waybel_0 \\
 & X2 X0)))) \Rightarrow ((v10_waybel_0 X2 X0) \Rightarrow (k12_lattice3 X0 X1 (k1_waybel_2 \\
 & X0 X2) = k1_yellow_0 X0 (k4_yellow_4 X0 (k6_domain_1 (u1_struct_0 \\
 & X0) X1) (k2_reset_1 (u1_struct_0 X0) (k1_waybel_0 X0 X2)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\
& ((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.\forall X3. \\
& ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X2 (u1_struct_0 X0)) \wedge (m1_subset_1 \\
& X3 (k1_zfmisc_1 (k2_zfmisc_1 X2 (u1_struct_0 X0)))))) \Rightarrow (k12_lattice3 \\
& X0 X1 (k4_yellow_2 X0 X3) = k1_waybel_2 X0 (k3_waybel_2 X0 X1 (k2_waybel_2 \\
& X0 X2 X3)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\\
& \forall X2.((\neg v2_struct_0 X2) \wedge ((v7_waybel_0 X2) \wedge (l1_waybel_0 \\
& X2 X0))) \Rightarrow ((v10_waybel_0 X2 X0) \Rightarrow (k12_lattice3 X0 X1 (k1_waybel_2 \\
& X0 X2) = k1_yellow_0 X0 (k4_yellow_4 X0 (k6_domain_1 (u1_struct_0 \\
& X0) X1) (k2_relset_1 (u1_struct_0 X0) (k1_waybel_0 X0 X2))))))) \\
& \tag{2}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v3_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow ((\forall X1.(m1_subset_1 \\
& X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge ((v7_waybel_0 \\
& X2) \wedge (l1_waybel_0 X2 X0))) \Rightarrow ((v10_waybel_0 X2 X0) \Rightarrow (k12_lattice3 \\
& X0 X1 (k1_waybel_2 X0 X2) = k1_yellow_0 X0 (k4_yellow_4 X0 (k6_domain_1 \\
& (u1_struct_0 X0) X1) (k2_relset_1 (u1_struct_0 X0) (k1_waybel_0 \\
& X0 X2)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\\
& \forall X2.\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X2 (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X2 (u1_struct_0 \\
& X0)))))) \Rightarrow (k12_lattice3 X0 X1 (k4_yellow_2 X0 X3) = k1_waybel_2 \\
& X0 (k3_waybel_2 X0 X1 (k2_waybel_2 X0 X2 X3)))))) \\
& \tag{3}
\end{aligned}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v2_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 \\
& X0) \wedge (v3_lattice3 X0))) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge \\
& ((v24_waybel_0 X0) \wedge (v25_waybel_0 X0)))))) \\
& \tag{5}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\
& X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\
& ((v2_waybel_2 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X2 (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X2 (u1_struct_0 \\
& X0)))))) \Rightarrow (k12_lattice3 X0 X1 (k4_yellow_2 X0 X3) = k1_waybel_2 \\
& X0 (k3_waybel_2 X0 X1 (k2_waybel_2 X0 X2 X3)))))) \\
& \tag{6}
\end{aligned}$$