

t57_waybel23
(TMQXYVgi12eWcjqJxrAfFPtDaFLk8nQCuaf)

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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 $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v3_waybel_3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v6_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $k7_waybel_0 : \iota \Rightarrow \iota$ be given. Let $k5_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_waybel23 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v12_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v3_waybel_3 X0) \wedge \\ & (l1_orders_2 X0))))))) \Rightarrow (\forall X1. ((v6_waybel23 X1 X0) \wedge (m1_waybel23 \\ & X1 X0)) \Rightarrow ((k1_reset_1 (u1_struct_0 X0) (k5_waybel23 X0 X1) = u1_struct_0 \\ & X0) \wedge (m1_subset_1 (k2_reset_1 (u1_struct_0 (k2_yellow_1 (k7_waybel_0 \\ & (k5_yellow_0 X0 X1)))) (k5_waybel23 X0 X1)) (k1_zfmisc_1 (k7_waybel_0 \\ & (k5_yellow_0 X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\wedge \\ & ((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))))\Rightarrow((\neg v2_struct_0 (k5_yellow_0 X0 X1))\wedge((v1_orders_2 (\\ & k5_yellow_0 X0 X1))\wedge(v4_yellow_0 (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v4_orders_2 X0)\wedge(l1_orders_2 X0))\wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow((v1_orders_2 \\ & (k5_yellow_0 X0 X1))\wedge((v4_orders_2 (k5_yellow_0 X0 X1))\wedge(v4_yellow_0 \\ & (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v3_orders_2 X0)\wedge(l1_orders_2 X0))\wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow((v1_orders_2 \\ & (k5_yellow_0 X0 X1))\wedge((v3_orders_2 (k5_yellow_0 X0 X1))\wedge(v4_yellow_0 \\ & (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(m1_yellow_0 X1 X0)\Rightarrow(l1_orders_2 X1)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 \\ & X0)\wedge((v1_lattice3 X0)\wedge((v3_waybel_3 X0)\wedge(l1_orders_2 X0))))))\Rightarrow \\ & (\forall X1.(m1_waybel23 X1 X0)\Rightarrow(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_orders_2 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))))\Rightarrow((v1_orders_2 (k5_yellow_0 X0 X1))\wedge((v4_yellow_0 \\ & (k5_yellow_0 X0 X1) X0)\wedge(m1_yellow_0 (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge((v4_orders_2 \\ & X0)\wedge(l1_orders_2 X0))))\Rightarrow(k7_waybel_0 X0 = ReplSep (toset (\lambda X1 : \\ & \iota.(\neg v1_xboole_0 X1)\wedge((v1_waybel_0 X1 X0)\wedge((v12_waybel_0 X1 \\ & X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) (\lambda X1 : \\ & \iota.True) (\lambda X1 : \iota.X1)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))\Rightarrow((v6_waybel23 \\ & X1 X0)\Rightarrow(\neg v1_xboole_0 X1))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (13)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v3_waybel_3 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v6_waybel23 X1 X0) \wedge (m1_waybel23 \\ & X1 X0)) \Rightarrow (\forall X2.(X2 \in k2_rset_1 (u1_struct_0 (k2_yellow_1 \\ & (k7_waybel_0 (k5_yellow_0 X0 X1)))) (k5_waybel23 X0 X1)) \Rightarrow ((\neg v1_xboole_0 \\ & X2) \wedge ((v1_waybel_0 X2 (k5_yellow_0 X0 X1)) \wedge ((v12_waybel_0 X2 (\\ & k5_yellow_0 X0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & (k5_yellow_0 X0 X1)))))))))) \end{aligned}$$