

t67_waybel23

(TMP8WpSoyuGY864Ghmus1LW8Gq7terdGdQn)

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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 $v18_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_waybel23 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v4_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_waybel23 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge ((v1_lattice3 X0) \wedge ((v3_waybel_3 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v6_waybel23 X1 X0) \wedge (m1_waybel23 \\ & X1 X0)) \Rightarrow ((v4_waybel_1 (k3_waybel23 X0 (k5_yellow_0 X0 X1)) (k2_yellow_1 \\ & (k7_waybel_0 (k5_yellow_0 X0 X1))) X0) \wedge (v5_waybel_1 (k5_waybel23 \\ & X0 X1) (k2_yellow_1 (k7_waybel_0 (k5_yellow_0 X0 X1))) X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.((\neg \\ & v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 \\ & X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow ((v5_waybel_1 \\ & X2 X0 X1) \Rightarrow (v18_waybel_0 X2 X1 X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((\neg v2_struct_0 (k2_yellow_1 X0)) \wedge (v1_orders_2 (k2_yellow_1 X0))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k2_yellow_1 X0)) \wedge ((v3_orders_2 (k2_yellow_1 X0)) \wedge ((v4_orders_2 (k2_yellow_1 X0)) \wedge (v5_orders_2 (k2_yellow_1 X0)))) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\neg v1_xboole_0 (k7_waybel_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow ((\neg v2_struct_0 (k5_yellow_0 X0 X1)) \wedge ((v1_orders_2 (k5_yellow_0 X0 X1)) \wedge (v4_yellow_0 (k5_yellow_0 X0 X1) X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v1_orders_2 (k5_yellow_0 X0 X1)) \wedge ((v4_orders_2 (k5_yellow_0 X0 X1)) \wedge (v4_yellow_0 (k5_yellow_0 X0 X1) X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v3_orders_2 X0) \wedge (l1_orders_2 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v1_orders_2 (k5_yellow_0 X0 X1)) \wedge ((v3_orders_2 (k5_yellow_0 X0 X1)) \wedge (v4_yellow_0 (k5_yellow_0 X0 X1) X0))) \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_yellow_0 X1 X0) \Rightarrow (l1_orders_2 X1)) \quad (9)$$

Assume the following.

$$\forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v3_waybel_3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_waybel23 X1 X0) \Rightarrow (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((l1_orders_2 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow((v1_orders_2 (k5_yellow_0 X0 X1))\wedge((v4_yellow_0 (k5_yellow_0 X0 X1) X0)\wedge(m1_yellow_0 (k5_yellow_0 X0 X1) X0))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(((v3_orders_2 X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_yellow_0 X0)\wedge((v1_lattice3 X0)\wedge((v3_waybel_3 X0)\wedge(l1_orders_2 X0)))))))\wedge((v6_waybel23 X1 X0)\wedge(m1_waybel23 X1 X0))\Rightarrow((v1_funct_1 (k5_waybel23 X0 X1))\wedge((v1_funct_2 (k5_waybel23 X0 X1) (u1_struct_0 X0) (u1_struct_0 (k2_yellow_1 (k7_waybel_0 (k5_yellow_0 X0 X1))))))\wedge(m1_subset_1 (k5_waybel23 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 (k2_yellow_1 (k7_waybel_0 (k5_yellow_0 X0 X1)))))))))) \quad (12)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k2_yellow_1 X0))\wedge(l1_orders_2 (k2_yellow_1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow((v6_waybel23 X1 X0)\Rightarrow(\neg v1_xboole_0 X1))) \quad (14)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v1_lattice3 X0)\Rightarrow(\neg v2_struct_0 X0)) \quad (15)$$

Theorem 1

$$\forall X0.(((v3_orders_2 X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_yellow_0 X0)\wedge((v1_lattice3 X0)\wedge((v3_waybel_3 X0)\wedge(l1_orders_2 X0)))))))\Rightarrow(\forall X1.(((v6_waybel23 X1 X0)\wedge(m1_waybel23 X1 X0))\Rightarrow(v18_waybel_0 (k5_waybel23 X0 X1) X0 (k2_yellow_1 (k7_waybel_0 (k5_yellow_0 X0 X1))))))$$