

t40_waybel14
(TMTeom8FyJj9iXCt25iYLka2tmBccHWQwK8)

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Let $v2_pre_topc : \iota \Rightarrow o$ 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 $v3_lattice3 : \iota \Rightarrow o$ be given. Let $v4_waybel11 : \iota \Rightarrow o$ be given. Let $l1_waybel_9 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_yellow_1 : \iota \Rightarrow \iota$ be given. Let $k5_waybel11 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_waybel_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_waybel_3 : \iota \Rightarrow o$ be given. Let $v1_waybel_5 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow ((v1_waybel_5 X0) \Leftrightarrow ((v3_waybel_3 X0) \wedge \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\exists X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge ((X1 = k1_yellow_0 X0 X2) \wedge \\ & \forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((X3 \in X2) \Rightarrow (v6_waybel_6 \\ & X3 X0)))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_lattice3 X0) \wedge ((v4_waybel11 X0) \wedge (l1_waybel_9 X0)))))))) \Rightarrow \\ & (k5_waybel11 X0 = u1_pre_topc X0) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow ((\neg v7_struct_0 (k2_yellow_1 (u1_pre_topc X0))) \wedge ((v1_orders_2 \\ & (k2_yellow_1 (u1_pre_topc X0))) \wedge (v3_lattice3 (k2_yellow_1 (\\ & u1_pre_topc X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((\neg v2_struct_0 (k2_yellow_1 X0)) \wedge (v1_orders_2 (k2_yellow_1 X0))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k2_yellow_1 X0)) \wedge ((v3_orders_2 (k2_yellow_1 X0)) \wedge ((v4_orders_2 (k2_yellow_1 X0)) \wedge (v5_orders_2 (k2_yellow_1 X0)))) \quad (5)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\neg v1_xboole_0 (u1_pre_topc X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l1_waybel_9 X0) \Rightarrow ((l1_pre_topc X0) \wedge (l1_orders_2 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v1_orders_2 (k2_yellow_1 X0)) \wedge (l1_orders_2 (k2_yellow_1 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v3_lattice3 X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v1_lattice3 X0) \wedge (v2_lattice3 X0)))) \quad (9)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge ((v4_waybel11 X0) \wedge (l1_waybel_9 X0)))))))))) \Rightarrow \\ & (((\forall X1.(m1_subset_1 X1 (u1_struct_0 (k2_yellow_1 (k5_waybel11 X0)))) \Rightarrow (\exists X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k2_yellow_1 (k5_waybel11 X0)))))) \wedge ((X1 = k1_yellow_0 (k2_yellow_1 (k5_waybel11 X0)) X2) \wedge (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k2_yellow_1 (k5_waybel11 X0)))) \Rightarrow ((X3 \in X2) \Rightarrow (v6_waybel_6 X3 (k2_yellow_1 (k5_waybel11 X0)))))) \wedge (v3_waybel_3 (k2_yellow_1 (k5_waybel11 X0)))) \Leftrightarrow (v1_waybel_5 (k2_yellow_1 (k5_waybel11 X0)))) \end{aligned}$$