

t38_waybel11
(TMVVwxn1us3RbNmrpSrbydCvzVBP9Ubz5AU)

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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 $v3_waybel_3 : \iota \Rightarrow o$ 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 $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v7_waybel_0 : \iota \Rightarrow o$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_yellow_6 : \iota \Rightarrow \iota$ be given. Let $r1_waybel11 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $m4_yellow_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_yellow_6 : \iota \Rightarrow \iota$ be given. Let $k13_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v8_yellow_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k2_waybel11 : \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v6_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_yellow_6 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & (m4_yellow_6 X1 X0) \Rightarrow ((k12_yellow_6 (k13_yellow_6 X0 X1) = X1) \Leftrightarrow \\ & (v8_yellow_6 X1 X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_lattice3 X0) \wedge ((v4_waybel11 X0) \wedge (l1_waybel_9 X0)))))))))) \Rightarrow \\ & (g1_pre_topc (u1_struct_0 X0) (u1_pre_topc X0) = k13_yellow_6 \\ & X0 (k2_waybel11 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ X1))) \Rightarrow ((g1_pre_topc (u1_struct_0 X0) (u1_pre_topc X0) = g1_pre_topc \\ (u1_struct_0 X1) (u1_pre_topc X1)) \Rightarrow (k12_yellow_6 X0 = k12_yellow_6 \\ X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ X0))) \Rightarrow (\forall X2. \forall X3. (g1_pre_topc X0 X1 = g1_pre_topc \\ X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 \\ (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ (m4_yellow_6 X1 X0)) \Rightarrow ((v1_pre_topc (k13_yellow_6 X0 X1)) \wedge (v2_pre_topc \\ (k13_yellow_6 X0 X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. ((v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (v1_xboole_0 \\ (u1_struct_0 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\ ((v3_waybel_3 X0) \wedge (l1_orders_2 X0)))))))) \Rightarrow (v8_yellow_6 (k2_waybel11 \\ X0) X0) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (m1_subset_1 (u1_pre_topc X0) (k1_zfmisc_1 \\ (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (9)$$

Assume the following.

$$\forall X0. (l1_waybel_9 X0) \Rightarrow ((l1_pre_topc X0) \wedge (l1_orders_2 X0)) \quad (10)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 X0))) \Rightarrow (m4_yellow_6 (k2_waybel11 X0) X0) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow ((v1_pre_topc (g1_pre_topc X0 X1)) \wedge (l1_pre_topc (g1_pre_topc X0 X1))) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 X0))) \Rightarrow (\forall X1. (m4_yellow_6 X1 X0) \Rightarrow ((X1 = k2_waybel11 X0) \Leftrightarrow \\ & (\forall X2. ((\neg v2_struct_0 X2) \wedge ((v4_orders_2 X2) \wedge ((v6_waybel_0 X2 X0) \wedge ((v7_waybel_0 X2) \wedge (l1_waybel_0 X2 X0)))))) \Rightarrow ((X2 \in k6_yellow_6 X0) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((k4_tarski X2 X3 \in X1) \Leftrightarrow (r1_waybel11 X0 X2 X3)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1. (m4_yellow_6 X1 X0) \Rightarrow ((X1 = k12_yellow_6 X0) \Leftrightarrow \\ & (\forall X2. ((\neg v2_struct_0 X2) \wedge ((v4_orders_2 X2) \wedge ((v7_waybel_0 X2) \wedge (l1_waybel_0 X2 X0)))))) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((k4_tarski X2 X3 \in X1) \Leftrightarrow ((X2 \in k6_yellow_6 X0) \wedge (X3 \in k10_yellow_6 X0 X2)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & (X1 = k6_yellow_6 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. ((\neg v2_struct_0 X3) \wedge ((v4_orders_2 X3) \wedge ((v6_waybel_0 X3 X0) \wedge ((v7_waybel_0 X3) \wedge (l1_waybel_0 X3 X0)))))) \wedge ((X3 = X2) \wedge (u1_struct_0 X3 \in k1_yellow_6 (u1_struct_0 X0)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski X0 X1 = k2_tarski X1 X0 \quad (18)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow ((v2_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (19)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0) \Rightarrow ((v1_pre_topc\ X0) \Rightarrow (X0 = g1_pre_topc\ (u1_struct_0\ X0)\ (u1_pre_topc\ X0))) \quad (20)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_pre_topc\ X0) \wedge ((v3_orders_2\ X0) \wedge ((v4_orders_2\ X0) \wedge ((v5_orders_2\ X0) \wedge ((v1_lattice3\ X0) \wedge ((v2_lattice3\ X0) \wedge \\ & ((v3_lattice3\ X0) \wedge ((v3_waybel_3\ X0) \wedge ((v4_waybel11\ X0) \wedge (l1_waybel_9\ X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow \\ & (\forall X2.((\neg v2_struct_0\ X2) \wedge ((v4_orders_2\ X2) \wedge ((v7_waybel_0\ X2) \wedge (l1_waybel_0\ X2\ X0)))))) \Rightarrow ((X2 \in k6_yellow_6\ X0) \Rightarrow ((r1_waybel11\ X0\ X2\ X1) \Leftrightarrow (X1 \in k10_yellow_6\ X0\ X2)))))) \end{aligned}$$