

t41_waybel19

(TMZrkRBeqVMk8ahLfrd1HfSa8oPjffHvteZ1)

October 27, 2020

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 $v2_waybel19 : \iota \Rightarrow o$ be given. Let $m1_yellow_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v13_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_waybel11 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $v12_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v24_waybel_0 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v25_waybel_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_lattice3 X0) \wedge ((v2_waybel19 X0) \wedge (l1_waybel_9 X0)))))))))) \Rightarrow \quad (1) \\ & (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & ((v3_pre_topc X1 X0) \Rightarrow (v3_waybel11 X1 X0))) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow ((\\ & g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 \\ & X1) (u1_orders_2 X1)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X1))) \Rightarrow ((X2 = X3) \Rightarrow (((v12_waybel_0 X2 X0) \Rightarrow (v12_waybel_0 \\ & X3 X1)) \wedge ((v13_waybel_0 X2 X0) \Rightarrow (v13_waybel_0 X3 X1)))))))))) \quad (2) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v24_waybel_0 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((\\ \neg v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge (l1_orders_2 X1))) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow (((g1_orders_2 \\ (u1_struct_0 X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 X1) \\ (u1_orders_2 X1)) \wedge ((X2 = X3) \wedge (v3_waybel11 X2 X0)) \Rightarrow (v3_waybel11 \\ X3 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ ((v4_waybel11 X0) \wedge (l1_waybel_9 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v3_pre_topc X1 X0) \Leftrightarrow ((v13_waybel_0 \\ X1 X0) \wedge (v3_waybel11 X1 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X0))) \Rightarrow (\forall X2. \forall X3.(g1_orders_2 X0 X1 = g1_orders_2 \\ X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.((v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (v1_xboole_0 \\ (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (u1_orders_2 X0) (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \quad (7)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_yellow_9 X1 X0) \Rightarrow \\ (l1_waybel_9 X1)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_waybel_9 X0) \Rightarrow ((l1_pre_topc X0) \wedge (l1_orders_2 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_waybel_9 X1) \Rightarrow ((\\ m1_yellow_9 X1 X0) \Leftrightarrow (g1_orders_2 (u1_struct_0 X1) (u1_orders_2 \\ X1) = g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v3_lattice3 X0) \wedge (l1_orders_2 X0))) \Rightarrow (\forall X1.(m1_yellow_9 X1 X0) \Rightarrow (v3_lattice3 X1)) \quad (12)$$

Assume the following.

$$\forall X0.((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1.(m1_yellow_9 X1 X0) \Rightarrow (v5_orders_2 X1)) \quad (13)$$

Assume the following.

$$\forall X0.((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1.(m1_yellow_9 X1 X0) \Rightarrow (v4_orders_2 X1)) \quad (14)$$

Assume the following.

$$\forall X0.((v3_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1.(m1_yellow_9 X1 X0) \Rightarrow (v3_orders_2 X1)) \quad (15)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v2_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (16)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v3_lattice3 X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v1_lattice3 X0) \wedge (v2_lattice3 X0)))) \quad (17)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v1_xboole_0 X1) \Rightarrow (v3_pre_topc X1 X0))) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (19)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (v3_lattice3 X0))) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v24_waybel_0 X0) \wedge (v25_waybel_0 X0)))))) \quad (20)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge ((v4_waybel11 X0) \wedge (l1_waybel_9 X0)))))))))) \Rightarrow \\ & (\forall X1.((v2_pre_topc X1) \wedge ((v2_waybel19 X1) \wedge (m1_yellow_9 X1 X0))) \Rightarrow (\forall X2.((v13_waybel_0 X2 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X1)))) \Rightarrow ((v3_pre_topc X2 X1) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((X3 = X2) \Rightarrow (v3_pre_topc X3 X0))))))) \end{aligned}$$