

t34_waybel19 (TMUAoxCcgCWMXAkp- kyyqrFbM2BPUY6wa4XK)

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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 $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v3_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v1_waybel19 : \iota \Rightarrow o$ be given. Let $m1_yellow_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_waybel11 : \iota \Rightarrow o$ be given. Let $m3_yellow_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_waybel19 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k5_waybel11 : \iota \Rightarrow \iota$ be given. Let $k1_cantor_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_cantor_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_waybel19 : \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_cantor_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_cantor_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $l1_waybel_9 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\ & (l1_orders_2 X0))))))) \Rightarrow (\forall X1. ((v4_waybel11 X1) \wedge (m1_yellow_9 \\ & X1 X0)) \Rightarrow (u1_pre_topc X1 = k5_waybel11 X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\ & (l1_orders_2 X0))))))) \Rightarrow (k2_waybel19 X0 = k1_cantor_1 (u1_struct_0 \\ & X0) (k2_cantor_1 (u1_struct_0 X0) (k4_subset_1 (k1_zfmisc_1 (\\ & u1_struct_0 X0)) (k5_waybel11 X0) (k1_waybel19 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\ & (m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow \\ & (((v1_tops_2\ X1\ X0)\wedge((v2_cantor_1\ X1\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k1_zfmisc_1\ (u1_struct_0\ X0))))))\Leftrightarrow((v1_tops_2\ (k2_cantor_1 \\ & (u1_struct_0\ X0)\ X1)\ X0)\wedge((v1_cantor_1\ (k2_cantor_1\ (u1_struct_0 \\ & X0)\ X1)\ X0)\wedge(m1_subset_1\ (k2_cantor_1\ (u1_struct_0\ X0)\ X1)\ (k1_zfmisc_1 \\ & (k1_zfmisc_1\ (u1_struct_0\ X0)))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\ & (m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow \\ & ((u1_pre_topc\ X0 = k1_cantor_1\ (u1_struct_0\ X0)\ X1)\Leftrightarrow((v1_tops_2 \\ & X1\ X0)\wedge((v1_cantor_1\ X1\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1 \\ & (u1_struct_0\ X0)))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1\ X1\ (k1_zfmisc_1 \\ & X0))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ X0)))\Rightarrow(k4_subset_1\ X0\ X1\ X2 = \\ & k2_xboole_0\ X1\ X2) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0\ X0\ X0 = X0 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X0)))\Rightarrow(\forall X2.\forall X3.(g1_orders_2\ X0\ X1 = g1_orders_2 \\ & X2\ X3)\Rightarrow((X0 = X2)\wedge(X1 = X3))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l1_orders_2\ X0)\Rightarrow(m1_subset_1\ (u1_orders_2\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)))) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_pre_topc\ X0)\wedge(l1_pre_topc\ X1))\Rightarrow(\\ & \forall X2.(m3_yellow_9\ X2\ X0\ X1)\Rightarrow((v2_pre_topc\ X2)\wedge(l1_pre_topc \\ & X2))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(l1_orders_2\ X0)\Rightarrow(\forall X1.(m1_yellow_9\ X1\ X0)\Rightarrow(l1_waybel_9\ X1)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_waybel_9 X0) \Rightarrow ((l1_pre_topc X0) \wedge (l1_orders_2 X0)) \quad (11)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 X0))) \Rightarrow (m1_subset_1 (k5_waybel11 X0) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (12)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (m1_subset_1 (k1_waybel19 X0) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(l1_pre_topc X1) \Rightarrow (\forall X2. \\ ((v2_pre_topc X2) \wedge (l1_pre_topc X2)) \Rightarrow ((m3_yellow_9 X2 X0 X1) \Leftrightarrow \\ ((u1_struct_0 X2 = k2_xboole_0 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge \\ ((v1_tops_2 (k2_xboole_0 (u1_pre_topc X0) (u1_pre_topc X1)) X2) \wedge \\ ((v2_cantor_1 (k2_xboole_0 (u1_pre_topc X0) (u1_pre_topc X1)) \\ X2) \wedge (m1_subset_1 (k2_xboole_0 (u1_pre_topc X0) (u1_pre_topc \\ X1)) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X2)))))))))) \quad (14) \end{aligned}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_waybel_9 X1) \Rightarrow ((m1_yellow_9 X1 X0) \Leftrightarrow (g1_orders_2 (u1_struct_0 X1) (u1_orders_2 X1) = g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0)))) \quad (15)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((X1 = k1_waybel19 X0) \Leftrightarrow (\forall X2. ((v2_pre_topc X2) \wedge ((v1_waybel19 X2) \wedge (m1_yellow_9 X2 X0)) \Rightarrow (X1 = u1_pre_topc X2)))) \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (17)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (18)$$

Theorem 1

$$\begin{aligned} \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\ (l1_orders_2 X0)))))) \Rightarrow (\forall X1. ((v2_pre_topc X1) \wedge ((v1_waybel19 \\ X1) \wedge (m1_yellow_9 X1 X0))) \Rightarrow (\forall X2. ((v2_pre_topc X2) \wedge ((v4_waybel11 \\ X2) \wedge (m1_yellow_9 X2 X0))) \Rightarrow (\forall X3. (m3_yellow_9 X3 X2 X1) \Rightarrow \\ (k2_waybel19 X0 = u1_pre_topc X3)))) \end{aligned}$$