

t27_waybel_9 (TMWRNgVUe- qyKaeQW2Fyu7QBttFL3eK9XTPd)

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Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v8_pre_topc : \iota \Rightarrow o$ 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 $l1_waybel_9 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v2_lattice3 \\ & X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (k8_relset_1 (u1_struct_0 X0) (u1_struct_0 X0) (k4_waybel_1 \\ & X0 X1) (k6_domain_1 (u1_struct_0 X0) X1) = k6_waybel_0 X0 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v8_pre_topc \\ & X0) \Rightarrow (v4_pre_topc (k6_domain_1 (u1_struct_0 X0) X1) X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow (\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \wedge ((\neg v1_xboole_0 X1) \wedge ((v1_finset_1 X1) \wedge ((v1_waybel_0 X1 \\ & X0) \wedge (v2_waybel_0 X1 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l1_waybel_9 X0) \Rightarrow ((l1_pre_topc X0) \wedge (l1_orders_2 X0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow (m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\wedge (m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow((v1_funct_1 (k4_waybel_1 X0 X1))\wedge((v1_funct_2 (k4_waybel_1 X0 X1) (u1_struct_0 X0) (u1_struct_0 X0))\wedge(m1_subset_1 (k4_waybel_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \quad (6)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(l1_pre_topc X1)\Rightarrow(\forall X2. ((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow((v5_pre_topc X2 X0 X1)\Leftrightarrow(\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X1)))\Rightarrow((v4_pre_topc X3 X1)\Rightarrow(v4_pre_topc (k8_relset_1 (u1_struct_0 X0) (u1_struct_0 X1) X2 X3) X0)))))) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (8)$$

Assume the following.

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

Theorem 1

$$\forall X0.((v2_pre_topc X0)\wedge((v8_pre_topc X0)\wedge((v3_orders_2 X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_lattice3 X0)\wedge ((v2_lattice3 X0)\wedge(l1_waybel_9 X0))))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow((\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(v5_pre_topc (k4_waybel_1 X0 X2) X0 X0))\Rightarrow(v4_pre_topc (k6_waybel_0 X0 X1) X0)))$$