

t35_waybel26 (TMdEN- rks2zHFKPrfFTb6DiMLLuVGBKustLJ)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r5_waybel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel26 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_waybel18 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_waybel18 : \iota$ be given. Let $k5_yellow_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v23_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_funct_6 : \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_waybel18 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v4_waybel_3 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_yellow_1 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& \quad X0))) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\exists X2. ((v1_funct_1 \\
& \quad X2) \wedge ((v1_funct_2 X2 (u1_struct_0 (k1_waybel26 X0 (k3_waybel18 \\
& \quad X1 (k7_funcop_1 X1 k9_waybel18)))) (u1_struct_0 (k5_yellow_1 \\
& \quad X1 (k7_funcop_1 X1 (k1_waybel26 X0 k9_waybel18)))))) \wedge (m1_subset_1 \\
& \quad X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k1_waybel26 X0 (k3_waybel18 \\
& \quad X1 (k7_funcop_1 X1 k9_waybel18)))) (u1_struct_0 (k5_yellow_1 \\
& \quad X1 (k7_funcop_1 X1 (k1_waybel26 X0 k9_waybel18)))))))))) \wedge ((v23_waybel_0 \\
& \quad X2 (k1_waybel26 X0 (k3_waybel18 X1 (k7_funcop_1 X1 k9_waybel18))) \\
& \quad (k5_yellow_1 X1 (k7_funcop_1 X1 (k1_waybel26 X0 k9_waybel18)))))) \wedge \\
& \quad (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) \\
& \quad (u1_struct_0 (k3_waybel18 X1 (k7_funcop_1 X1 k9_waybel18)))))) \wedge \\
& \quad ((v5_pre_topc X3 X0 (k3_waybel18 X1 (k7_funcop_1 X1 k9_waybel18)))) \wedge \\
& \quad (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\
& \quad (k3_waybel18 X1 (k7_funcop_1 X1 k9_waybel18)))))))))) \Rightarrow (k1_funct_1 \\
& \quad X2 X3 = k10_funct_6 X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(l1_pre_topc X1) \Rightarrow (v1_waybel18 (k2_funcop_1 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2_struct_0 X1) \wedge (l1_struct_0 X1)) \Rightarrow (v4_waybel_3 (k2_funcop_1 X0 X1)) \quad (4)$$

Assume the following.

$$(\neg v2_struct_0 k9_waybel18) \wedge ((v1_pre_topc k9_waybel18) \wedge (v2_pre_topc k9_waybel18)) \quad (5)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k1_tarSKI X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 X1 X0) \wedge (v1_funct_1 X1) \wedge ((v1_partfun1 X1 X0) \wedge ((v4_waybel_3 X1) \wedge (v1_waybel18 X1)))))) \Rightarrow ((\neg v2_struct_0 (k3_waybel18 X0 X1)) \wedge ((v1_pre_topc (k3_waybel18 X0 X1)) \wedge (v2_pre_topc (k3_waybel18 X0 X1)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(l1_orders_2 X1) \Rightarrow (v1_yellow_1 (k2_funcop_1 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (9)$$

Assume the following.

$$(v1_pre_topc k9_waybel18) \wedge (l1_pre_topc k9_waybel18) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(v1_funct_1 (k7_funcop_1 X0 X1)) \wedge ((v1_funct_2 (k7_funcop_1 X0 X1) X0 (k1_tarSKI X1)) \wedge (m1_subset_1 (k7_funcop_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 (k1_tarSKI X1)))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge(v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge(v1_yellow_1 X1))))\Rightarrow((v1_orders_2 (k5_yellow_1 X0 X1))\wedge(l1_orders_2 (k5_yellow_1 X0 X1))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge(v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge((v4_waybel_3 X1)\wedge(v1_waybel18 X1))))\Rightarrow((v1_pre_topc (k3_waybel18 X0 X1))\wedge((v2_pre_topc (k3_waybel18 X0 X1))\wedge(l1_pre_topc (k3_waybel18 X0 X1)))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\wedge((\neg v2_struct_0 X1)\wedge((v2_pre_topc X1)\wedge(l1_pre_topc X1))))\Rightarrow((\neg v2_struct_0 (k1_waybel26 X0 X1))\wedge((v1_orders_2 (k1_waybel26 X0 X1))\wedge(l1_orders_2 (k1_waybel26 X0 X1)))) \quad (14)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(l1_orders_2 X1)\Rightarrow((r5_waybel_1 X0 X1)\Leftrightarrow(\exists X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\wedge(v23_waybel_0 X2 X0 X1)))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v1_funct_2 X2 X0 X1)\Rightarrow(v1_partfun1 X2 X0))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (18)$$

Theorem 1

$$\forall X0.(((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\Rightarrow(\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(r5_waybel_1 (k1_waybel26 X0 (k3_waybel18 X1 (k7_funcop_1 X1 k9_waybel18))) (k5_yellow_1 X1 (k7_funcop_1 X1 (k1_waybel26 X0 k9_waybel18))))))$$