

t8_jordan16

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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 $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ 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 $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\
 & ((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc X1))) \Rightarrow (\forall X2. \\
 & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\
 & X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
 & X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3.(m1_pre_topc X3 X1) \Rightarrow ((\\
 & v5_pre_topc X2 X0 X1) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 \\
 & X4 (u1_struct_0 X0) (u1_struct_0 X3)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X3)))))) \Rightarrow ((X4 = X2) \Rightarrow \\
 & (v5_pre_topc X4 X0 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\
 & ((\neg v1_xboole_0 X1) \wedge ((\neg v1_xboole_0 X3) \wedge (((v1_funct_1 X4) \wedge ((\\
 & v1_funct_2 X4 X0 X1) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & X0 X1)))))) \wedge ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 X2 X3) \wedge (m1_subset_1 \\
 & X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X3)))))) \Rightarrow ((r1_funct_2 X0 X1 \\
 & X2 X3 X4 X5) \Leftrightarrow (X4 = X5))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \tag{3}$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \tag{4}$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(l1_struct_0\ X0) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge(l1_pre_topc \\ & X0)))\Rightarrow(\forall X1.((\neg v2_struct_0\ X1)\wedge((v2_pre_topc\ X1)\wedge(l1_pre_topc \\ & X1)))\Rightarrow(\forall X2.((\neg v2_struct_0\ X2)\wedge(m1_pre_topc\ X2\ X1))\Rightarrow(\\ & \forall X3.((v1_funct_1\ X3)\wedge((v1_funct_2\ X3\ (u1_struct_0\ X0) \\ & (u1_struct_0\ X1))\wedge(m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & (u1_struct_0\ X0)\ (u1_struct_0\ X1))))))\Rightarrow(\forall X4.((v1_funct_1 \\ & X4)\wedge((v1_funct_2\ X4\ (u1_struct_0\ X0)\ (u1_struct_0\ X2))\wedge(m1_subset_1 \\ & X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X2))))))\Rightarrow \\ & (((r1_funct_2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)\ (u1_struct_0 \\ & X0)\ (u1_struct_0\ X2)\ X3\ X4)\wedge(v5_pre_topc\ X3\ X0\ X1))\Rightarrow(v5_pre_topc \\ & X4\ X0\ X2)))))) \end{aligned}$$