

t6_sprect_1 (TMYb-
JzyaZ15vinEE2zfLRhm1XaZGK7ZPV4K)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_connsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(\neg(\neg r1_xboole_0 X0 (k2_xboole_0 X1 X2)) \wedge ((r1_xboole_0 X0 X1) \wedge (r1_xboole_0 X0 X2))) \wedge (\neg(\neg(r1_xboole_0 X0 X1) \wedge (r1_xboole_0 X0 X2)) \wedge (r1_xboole_0 X0 (k2_xboole_0 X1 X2))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski X0 X1) \wedge ((r1_tarski X0 X2) \wedge (r1_xboole_0 X1 X2))) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((r3_connsp_1 X0 X2 X1) \Rightarrow (r1_tarski X1 X2)))) \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg(r3_connsp_1 X0 X2 X1) \wedge (X1 = k1_xboole_0)))) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\ & (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(\forall X2. \\ & (m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(\forall X3. \\ & (m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(\neg(r3_connsp_1 \\ & X0\ X3\ X1)\wedge((r3_connsp_1\ X0\ X3\ X2)\wedge((X1\neq X2)\wedge(\neg r1_xboole_0\ X1\ X2)))))) \\ & \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski\ X0\ X0 \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1\ X1\ (k1_zfmisc_1 \\ & X0))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ X0)))\Rightarrow(k4_subset_1\ X0\ X1\ X2 = \\ & k2_xboole_0\ X1\ X2) \\ & \end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge(l1_pre_topc \\ & X0)))\Rightarrow(\forall X1.((\neg v1_xboole_0\ X1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (u1_struct_0\ X0))))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (u1_struct_0\ X0)))\Rightarrow(\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1 \\ & (u1_struct_0\ X0)))\Rightarrow(\forall X4.(m1_subset_1\ X4\ (k1_zfmisc_1 \\ & (u1_struct_0\ X0)))\Rightarrow(\neg(r3_connsp_1\ X0\ X1\ X2)\wedge((r3_connsp_1\ X0 \\ & X1\ X3)\wedge((r3_connsp_1\ X0\ X1\ X4)\wedge((k4_subset_1\ (u1_struct_0\ X0) \\ & X2\ X3 = X1)\wedge((X4\neq X2)\wedge(X4\neq X3)))))))))) \\ & \end{aligned}$$