

t22_transgeo

(TMdPr4KqbdVDS9Dsxi6yZusX1KBfajC1Kui)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ 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 $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_transgeo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $u1_analoaf : \iota \Rightarrow \iota$ be given. Let $r1_transgeo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow \\ & (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_analoaf X0) \Rightarrow (m1_subset_1 (u1_analoaf X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l1_analoaf\ X0)\Rightarrow(l1_struct_0\ X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0\ X0)\wedge \\ & (((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ X0\ X1)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1))))))\wedge(m1_subset_1\ X3\ X0)))\Rightarrow(m1_subset_1\ (\\ & k3_funct_2\ X0\ X1\ X2\ X3)\ X1) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0\ X0)\wedge \\ & ((\neg v1_xboole_0\ X1)\wedge((m1_subset_1\ X2\ X0)\wedge(m1_subset_1\ X3\ X1))))\Rightarrow \\ & (m1_subset_1\ (k1_domain_1\ X0\ X1\ X2\ X3)\ (k2_zfmisc_1\ X0\ X1)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge(l1_analoaf\ X0))\Rightarrow(\forall X1. \\ & ((v1_funct_1\ X1)\wedge((v1_funct_2\ X1\ (u1_struct_0\ X0)\ (u1_struct_0 \\ & X0))\wedge((v3_funct_2\ X1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0))\wedge(m1_subset_1 \\ & X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)))))))\Rightarrow \\ & ((r3_transgeo\ X0\ X1)\Leftrightarrow(r1_transgeo\ (u1_struct_0\ X0)\ X1\ (u1_analoaf \\ & X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge(\\ & (v1_funct_2\ X1\ X0\ X0)\wedge((v3_funct_2\ X1\ X0\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X0))))))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ (k2_zfmisc_1\ X0\ X0)\ (k2_zfmisc_1\ X0\ X0))))\Rightarrow((r1_transgeo \\ & X0\ X1\ X2)\Leftrightarrow(\forall X3.(m1_subset_1\ X3\ X0)\Rightarrow(\forall X4.(m1_subset_1 \\ & X4\ X0)\Rightarrow(k4_tarski\ (k4_tarski\ X3\ X4)\ (k4_tarski\ (k3_funct_2\ X0\ X0 \\ & X1\ X3)\ (k3_funct_2\ X0\ X0\ X1\ X4))\in X2)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge(l1_analoaf\ X0))\Rightarrow(\forall X1. \\ & (m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(\forall X2.(m1_subset_1\ X2 \\ & (u1_struct_0\ X0))\Rightarrow(\forall X3.(m1_subset_1\ X3\ (u1_struct_0\ X0))\Rightarrow \\ & (\forall X4.(m1_subset_1\ X4\ (u1_struct_0\ X0))\Rightarrow((r2_analoaf\ X0 \\ & X1\ X2\ X3\ X4)\Leftrightarrow(k1_domain_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0 \\ & X0))\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0))\ (k1_domain_1 \\ & (u1_struct_0\ X0)\ (u1_struct_0\ X0)\ X1\ X2)\ (k1_domain_1\ (u1_struct_0 \\ & X0)\ (u1_struct_0\ X0)\ X3\ X4)\in u1_analoaf\ X0)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0)))\Rightarrow(v1_xboole_0 X2)) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_analoaf X0))\Rightarrow(\forall X1. \\ & ((v1_funct_1 X1)\wedge((v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\ & X0))\wedge((v3_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 X0))\wedge(m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))))\Rightarrow \\ & ((r3_transgeo X0 X1)\Leftrightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(r2_analoaf \\ & X0 X2 X3 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) X1 X2) (k3_funct_2 \\ & (u1_struct_0 X0) (u1_struct_0 X0) X1 X3)))))) \end{aligned}$$