

l30_transgeo

(TMKH5KwTFHapBBj7UGkopDguUaSDRmUY1FP)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_transgeo : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ be given. Let $r1_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_analoaf : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. (\neg v1_xboole_0 \\ X2) \Rightarrow (\neg(X0 \in k2_zfmisc_1 X1 X2) \wedge (\forall X3. (m1_subset_1 X3 X1) \Rightarrow \\ (\forall X4. (m1_subset_1 X4 X2) \Rightarrow (X0 \neq k4_tarski X3 X4)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow \\ (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_analoaf X0) \Rightarrow (m1_subset_1 (u1_analoaf X0) (k1_zfmisc_1 \\ (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) \\ (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & ((\neg v1_xboole_0 X1)\wedge((m1_subset_1 X2 X0)\wedge(m1_subset_1 X3 X1))))\Rightarrow \\ & (m1_subset_1 (k1_domain_1 X0 X1 X2 X3) (k2_zfmisc_1 X0 X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_analoaf X0))\Rightarrow((v1_transgeo \\ & X0)\Leftrightarrow((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0))\Rightarrow(\forall X4.(m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow \\ & (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0))\Rightarrow(\forall X6.(m1_subset_1 \\ & X6 (u1_struct_0 X0))\Rightarrow(((r2_analoaf X0 X1 X2 X5 X6)\wedge(r2_analoaf \\ & X0 X5 X6 X3 X4))\Rightarrow((X5 = X6)\vee(r2_analoaf X0 X1 X2 X3 X4))))))\wedge((\\ & \forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0))\Rightarrow(r2_analoaf X0 X1 X1 X2 X3))))\wedge((\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(\forall X4. \\ & (m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow((r2_analoaf X0 X1 X2 X3 X4)\Rightarrow \\ & (r2_analoaf X0 X3 X4 X1 X2))))))\wedge(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(r2_analoaf \\ & X0 X1 X2 X1 X2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_analoaf X0))\Rightarrow(\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow \\ & (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow((r2_analoaf X0 \\ & X1 X2 X3 X4)\Leftrightarrow(k1_domain_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ & X0)) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (k1_domain_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0) X1 X2) (k1_domain_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0) X3 X4) \in u1_analoaf X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_relat_1 X0)\Rightarrow(\forall X1.(r1_relat_2 X0 X1)\Leftrightarrow(\forall X2. \\ & (X2 \in X1)\Rightarrow(k4_tarski X2 X2 \in X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0))\Rightarrow(v1_xboole_0 X2)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))\Rightarrow(v1_relat_1 X2) \end{aligned} \quad (12)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v1_transgeo X0) \wedge (l1_analoaf X0))) \Rightarrow (r1_relat_2 (u1_analoaf X0) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))$$