

t11_translac
(TMTbgo77EYyp22gmmZKVcdJpzRdo3tKzsn5)

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Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v1_diraf : \iota \Rightarrow o$ be given. Let $v2_diraf : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_transgeo : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_transgeo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_transgeo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow ((r1_aff_1 X0 X1 X2 X3) \Rightarrow ((r1_aff_1 X0 X1 X3 X2) \wedge ((r1_aff_1 \\ & X0 X2 X1 X3) \wedge ((r1_aff_1 X0 X2 X3 X1) \wedge ((r1_aff_1 X0 X3 X1 X2) \wedge (r1_aff_1 \\ & X0 X3 X2 X1)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) \\
& (u1_struct_0 X0)) \wedge ((v3_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0)))))) \Rightarrow ((v6_transgeo X1 X0) \Leftrightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (r2_analoaf X0 X2 X3 (k3_funct_2 (u1_struct_0 \\
& X0) (u1_struct_0 X0) X1 X2) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& X0) X1 X3))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5. \\
& (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 X6 \\
& (u1_struct_0 X0)) \Rightarrow (\neg(X1 \neq X2) \wedge ((\neg(\neg(r2_analoaf X0 X1 X2 X3 X4) \wedge \\
& (r2_analoaf X0 X1 X2 X5 X6)) \wedge ((\neg(r2_analoaf X0 X1 X2 X3 X4) \wedge (r2_analoaf \\
& X0 X5 X6 X1 X2)) \wedge ((\neg(r2_analoaf X0 X3 X4 X1 X2) \wedge (r2_analoaf X0 X5 X6 \\
& X1 X2)) \wedge (\neg(r2_analoaf X0 X3 X4 X1 X2) \wedge (r2_analoaf X0 X1 X2 X5 X6)))))) \wedge \\
& (\neg r2_analoaf X0 X3 X4 X5 X6))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((r2_analoaf \\
& X0 X1 X2 X3 X4) \Rightarrow ((r2_analoaf X0 X1 X2 X4 X3) \wedge ((r2_analoaf X0 X2 X1 X3 \\
& X4) \wedge ((r2_analoaf X0 X2 X1 X4 X3) \wedge ((r2_analoaf X0 X3 X4 X1 X2) \wedge ((r2_analoaf \\
& X0 X3 X4 X2 X1) \wedge ((r2_analoaf X0 X4 X3 X1 X2) \wedge (r2_analoaf X0 X4 X3 X2 \\
& X1))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow ((r2_analoaf X0 X1 X2 X2 X1) \wedge (r2_analoaf X0 \\
& X1 X2 X1 X2))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X3)\wedge \\ & ((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\Rightarrow(\forall X4.((v1_relat_1 X4)\wedge(v1_funct_1 X4))\Rightarrow((\\ & X2 \in X0)\Rightarrow((X1 = k1_xboole_0)\vee(k1_funct_1 (k3_relat_1 X3 X4) X2 = \\ & k1_funct_1 X4 (k1_funct_1 X3 X2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (\\ & k2_zfmisc_1 X0 X1))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1)\wedge((v1_funct_2 \\ & X1 X0 X0)\wedge((v3_funct_2 X1 X0 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (\\ & k2_zfmisc_1 X0 X0))))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X0)\wedge \\ & ((v3_funct_2 X2 X0 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0))))))\Rightarrow(k1_transgeo X0 X1 X2 = k3_relat_1 X1 X2)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1)\wedge((v1_funct_2 \\ & X1 X0 X0)\wedge((v3_funct_2 X1 X0 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (\\ & k2_zfmisc_1 X0 X0))))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X0)\wedge \\ & ((v3_funct_2 X2 X0 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0))))))\Rightarrow((v1_funct_1 (k3_relat_1 X1 X2)\wedge((v1_funct_2 (\\ & k3_relat_1 X1 X2) X0 X0)\wedge(v3_funct_2 (k3_relat_1 X1 X2) X0 X0))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (12)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (13)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (14)$$

Assume the following.

$$\forall X0.(l1_analof X0)\Rightarrow(l1_struct_0 X0) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0))\Rightarrow(m1_subset_1 (\\ & k3_funct_2 X0 X1 X2 X3) X1) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1)\wedge((v1_funct_2 \\ & X1 X0 X0)\wedge((v3_funct_2 X1 X0 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (\\ & k2_zfmisc_1 X0 X0))))))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X0)\wedge \\ & ((v3_funct_2 X2 X0 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0))))))\Rightarrow((v1_funct_1 (k1_transgeo X0 X1 X2))\wedge((v1_funct_2 \\ & (k1_transgeo X0 X1 X2) X0 X0)\wedge((v3_funct_2 (k1_transgeo X0 X1 X2) \\ & X0 X0)\wedge(m1_subset_1 (k1_transgeo X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0)\wedge((v1_diraf X0)\wedge(l1_analoaf X0)))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0))\Rightarrow((r1_aff_1 X0 X1 X2 X3)\Leftrightarrow(r2_analoaf X0 X1 X2 X1 X3)))))) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0)\wedge((v1_diraf X0)\wedge(l1_analoaf X0)))\Rightarrow \\ & (\forall X1.(((v1_funct_1 X1)\wedge((v1_funct_2 X1 (u1_struct_0 X0) \\ & (u1_struct_0 X0))\wedge((v3_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\ & X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0))))))\Rightarrow((v7_transgeo X1 X0)\Leftrightarrow((v6_transgeo \\ & X1 X0)\wedge((r2_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) X1 (k6_partfun1 \\ & (u1_struct_0 X0)))\vee(\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0))\Rightarrow(X2\neq k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) X1 X2)))))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_relat_1 X1)) \quad (20)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow((\neg v7_struct_0 X0)\Rightarrow(\neg v2_struct_0 X0)) \quad (21)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (v2_diraf X0) \wedge \\ & (l1_analoaf X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 \\ & X0) (u1_struct_0 X0)) \wedge ((v3_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0)))))) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 \\ & X3 (u1_struct_0 X0) (u1_struct_0 X0)) \wedge ((v3_funct_2 X3 (u1_struct_0 \\ & X0) (u1_struct_0 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow (((v7_transgeo X2 X0) \wedge \\ & ((v7_transgeo X3 X0) \wedge (r2_analoaf X0 X1 (k3_funct_2 (u1_struct_0 \\ & X0) (u1_struct_0 X0) X2 X1) X1 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\ & X0) X3 X1))) \Rightarrow (r2_analoaf X0 X1 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\ & X0) X2 X1) X1 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) (k1_transgeo \\ & (u1_struct_0 X0) X3 X2) X1)))))) \end{aligned}$$