

t59_transgeo (TM- Toz3xJ5Z8mUGQPfwZmsrkziDYXXfzHCUK)

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Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v2_analoaf : \iota \Rightarrow o$ 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 $v4_transgeo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_diraf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_transgeo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_diraf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X5.((v1_funct_1 X5) \wedge ((v1_funct_2 X5 (u1_struct_0 X0) \\
& (u1_struct_0 X0)) \wedge ((v3_funct_2 X5 (u1_struct_0 X0) (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0)))))) \Rightarrow (((v4_transgeo X5 X0) \wedge ((k3_funct_2 \\
& (u1_struct_0 X0) (u1_struct_0 X0) X5 X1 = X1) \wedge ((r1_diraf X0 X2 X1 \\
& (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) X5 X2)) \wedge (r3_diraf \\
& X0 X1 X3 X4)))) \Rightarrow ((X2 = X1) \vee (r2_analoaf X0 X3 X4 (k3_funct_2 (u1_struct_0 \\
& X0) (u1_struct_0 X0) X5 X4) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& X0) X5 X3)))))))))
\end{aligned}
\tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X5.((v1_funct_1 X5) \wedge ((v1_funct_2 X5 (u1_struct_0 X0) \\
& (u1_struct_0 X0)) \wedge ((v3_funct_2 X5 (u1_struct_0 X0) (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0)))))) \Rightarrow (((v4_transgeo X5 X0) \wedge ((k3_funct_2 \\
& (u1_struct_0 X0) (u1_struct_0 X0) X5 X1 = X1) \wedge (r1_diraf X0 X2 X1 (\\
& k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) X5 X2)))) \Rightarrow ((X2 = X1) \vee \\
& ((r3_diraf X0 X1 X3 X4) \vee (r2_analoaf X0 X3 X4 (k3_funct_2 (u1_struct_0 \\
& X0) (u1_struct_0 X0) X5 X4) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& X0) X5 X3)))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
& X0))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\
& X0) (u1_struct_0 X0)) \wedge ((v3_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0)))))) \Rightarrow ((v3_transgeo X1 X0) \Leftrightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (r2_analoaf X0 X2 X3 (k3_funct_2 (u1_struct_0 \\
& X0) (u1_struct_0 X0) X1 X3) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& X0) X1 X2))))))
\end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge \\
& ((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 X0)) \wedge ((v3_funct_2 \\
& X3 (u1_struct_0 X0) (u1_struct_0 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow (((v4_transgeo \\
& X3 X0) \wedge ((k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) X3 X1 = X1) \wedge \\
& (r1_diraf X0 X2 X1 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) \\
& X3 X2)))) \Rightarrow ((X2 = X1) \vee (v3_transgeo X3 X0))))))
\end{aligned}$$