

t56_transgeo (TM-
NDm6xDZBcuHPFQc6XhLTARYNx7krdA1YR)

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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 $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ 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 $r1_diraf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_diraf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
 & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\neg (X1 \neq X2) \wedge (\forall X3. (m1_subset_1 \\
 & X3 (u1_struct_0 X0)) \Rightarrow (r3_diraf X0 X1 X2 X3))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (((r3_diraf X0 \\
& X1 X2 X3) \wedge ((r3_diraf X0 X1 X2 X4) \wedge (r3_diraf X0 X1 X2 X5))) \Rightarrow ((X1 = X2) \vee \\
& (r3_diraf X0 X3 X4 X5)))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r3_diraf X0 X1 X1 X2) \wedge ((r3_diraf \\
& X0 X1 X2 X2) \wedge (r3_diraf X0 X1 X2 X1))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow ((r3_diraf X0 X1 X2 X3) \Rightarrow ((r3_diraf X0 X1 X3 X2) \wedge \\
& ((r3_diraf X0 X2 X1 X3) \wedge ((r3_diraf X0 X2 X3 X1) \wedge ((r3_diraf X0 X3 X1 \\
& X2) \wedge (r3_diraf X0 X3 X2 X1))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_diraf X0 X1 X1 X2) \wedge (r1_diraf \\
& X0 X1 X2 X2))))
\end{aligned} \tag{6}$$

Theorem 1

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