

l26_geomtrap

(TMP1NeBKA AKZu8UnpZmCcE2wbiJSqiCJjCt)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_analmetr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_analmetr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_analmetr : \iota \Rightarrow o$ be given. Let $l1_analmetr : \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_analmetr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_analmetr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_analoaf : \iota \Rightarrow \iota$ be given. Let $k1_diraf : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_analoaf : \iota \Rightarrow \iota$ be given. Let $u1_analmetr : \iota \Rightarrow \iota$ be given. Let $k1_analmetr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_analmetr X0) \wedge (l1_analmetr \\
& \quad X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\
& \quad (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& \quad (\forall X5. (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6. (m1_subset_1 \\
& \quad X6 (u1_struct_0 X0)) \Rightarrow (\neg (X1 \neq X2) \wedge ((\neg (\neg (r2_analoaf X0 X1 X2 X3 X4) \wedge \\
& \quad (r4_analmetr X0 X1 X2 X5 X6)) \wedge ((\neg (r2_analoaf X0 X1 X2 X5 X6) \wedge (r4_analmetr \\
& \quad X0 X1 X2 X3 X4)) \wedge ((\neg (r2_analoaf X0 X1 X2 X3 X4) \wedge (r4_analmetr X0 X5 \\
& \quad X6 X1 X2)) \wedge ((\neg (r2_analoaf X0 X1 X2 X5 X6) \wedge (r4_analmetr X0 X3 X4 X1 \\
& \quad X2)) \wedge ((\neg (r2_analoaf X0 X3 X4 X1 X2) \wedge (r4_analmetr X0 X5 X6 X1 X2)) \wedge \\
& \quad ((\neg (r2_analoaf X0 X5 X6 X1 X2) \wedge (r4_analmetr X0 X3 X4 X1 X2)) \wedge ((\neg \\
& \quad r2_analoaf X0 X3 X4 X1 X2) \wedge (r4_analmetr X0 X1 X2 X5 X6)) \wedge (\neg (r2_analoaf \\
& \quad X0 X5 X6 X1 X2) \wedge (r4_analmetr X0 X1 X2 X3 X4)))))))))) \wedge (\neg r4_analmetr \\
& \quad X0 X3 X4 X5 X6)))))))))
\end{aligned}$$

(1)

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6. \\
& (m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow (\forall X7.(m1_subset_1 X7 \\
& (u1_struct_0 (k2_analmetr X0 X1 X2)) \Rightarrow (\forall X8.(m1_subset_1 \\
& X8 (u1_struct_0 (k2_analmetr X0 X1 X2)) \Rightarrow (\forall X9.(m1_subset_1 \\
& X9 (u1_struct_0 (k2_analmetr X0 X1 X2)) \Rightarrow (\forall X10.(m1_subset_1 \\
& X10 (u1_struct_0 (k2_analmetr X0 X1 X2)) \Rightarrow (((X7 = X3) \wedge ((X8 = X4) \wedge \\
& ((X9 = X5) \wedge (X10 = X6)))) \Rightarrow ((r2_analoaf (k2_analmetr X0 X1 X2) X7 X8 \\
& X9 X10) \Leftrightarrow (r1_geomtrap X0 X3 X4 X5 X6)))))))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_analmetr \\
& X0 X1 X2) \Rightarrow ((\neg v2_struct_0 (k2_analmetr X0 X1 X2)) \wedge ((v2_analmetr \\
& (k2_analmetr X0 X1 X2)) \wedge (l1_analmetr (k2_analmetr X0 X1 X2))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6. \\
& (m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow (\forall X7.(m1_subset_1 X7 \\
& (u1_struct_0 (k2_analmetr X0 X5 X6)) \Rightarrow (\forall X8.(m1_subset_1 \\
& X8 (u1_struct_0 (k2_analmetr X0 X5 X6)) \Rightarrow (\forall X9.(m1_subset_1 \\
& X9 (u1_struct_0 (k2_analmetr X0 X5 X6)) \Rightarrow (\forall X10.(m1_subset_1 \\
& X10 (u1_struct_0 (k2_analmetr X0 X5 X6)) \Rightarrow (((X7 = X1) \wedge ((X8 = X2) \wedge \\
& ((X9 = X3) \wedge (X10 = X4)))) \Rightarrow ((r4_analmetr (k2_analmetr X0 X5 X6) X7 \\
& X9 X8 X10) \Leftrightarrow (r3_analmetr X0 X1 X3 X2 X4 X5 X6)))))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((u1_struct_0 \\
& (k2_analmetr X0 X1 X2) = u1_struct_0 X0) \wedge ((u1_analoaf (k2_analmetr \\
& X0 X1 X2) = k1_diraf (u1_struct_0 X0) (k1_analoaf X0)) \wedge (u1_analmetr \\
& (k2_analmetr X0 X1 X2) = k1_analmetr X0 X1 X2))))))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6. \\
& (m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow (\forall X7.(m1_subset_1 X7 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X8.(m1_subset_1 X8 (u1_struct_0 X0)) \Rightarrow \\
& ((r1_analmetr X0 X1 X2) \Rightarrow (((\neg r1_geomtrap X0 X3 X4 X5 X6) \wedge (\neg r1_geomtrap \\
& X0 X5 X6 X3 X4)) \vee (((\neg r3_analmetr X0 X7 X8 X5 X6 X1 X2) \wedge (\neg r3_analmetr \\
& X0 X5 X6 X7 X8 X1 X2)) \vee ((X5 = X6) \vee ((r3_analmetr X0 X3 X4 X7 X8 X1 X2) \wedge \\
& (r3_analmetr X0 X7 X8 X3 X4 X1 X2))))))))))))))
\end{aligned}$$