

l90_geomtrap

(TMJa7EPiKgibtZPpPgHRMPUN7LuiaHMggyCF)

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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 $k7_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $g1_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_geomtrap : \iota \Rightarrow o$ be given. Let $l1_geomtrap : \iota \Rightarrow o$ be given. Let $k6_geomtrap : \iota \Rightarrow \iota$ be given. Let $k5_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_midsp_1 : \iota \Rightarrow \iota$ be given. Let $u1_analoaf : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X5. (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6. \\
& (m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow (\forall X7. (m1_subset_1 X7 \\
& (u1_struct_0 (k7_geomtrap X0 X5 X6)) \Rightarrow (\forall X8. (m1_subset_1 \\
& X8 (u1_struct_0 (k7_geomtrap X0 X5 X6)) \Rightarrow (\forall X9. (m1_subset_1 \\
& X9 (u1_struct_0 (k7_geomtrap X0 X5 X6)) \Rightarrow (\forall X10. (m1_subset_1 \\
& X10 (u1_struct_0 (k7_geomtrap X0 X5 X6)) \Rightarrow (((X1 = X7) \wedge ((X2 = X8) \wedge \\
& ((X3 = X9) \wedge (X4 = X10)))) \Rightarrow ((r2_analoaf (k7_geomtrap X0 X5 X6) X7 X8 \\
& X9 X10) \Leftrightarrow (r2_geomtrap X0 X5 X6 X1 X2 X3 X4)))))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6. \\
& (m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow (\forall X7.(m1_subset_1 X7 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X8.(m1_subset_1 X8 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X9.(m1_subset_1 X9 (u1_struct_0 X0)) \Rightarrow (\forall X10.(\\
& m1_subset_1 X10 (u1_struct_0 X0)) \Rightarrow (\forall X11.(m1_subset_1 \\
& X11 (u1_struct_0 X0)) \Rightarrow (((X3 = k1_geomtrap X0 X4 X8) \wedge ((X3 = k1_geomtrap \\
& X0 X5 X9) \wedge ((X3 = k1_geomtrap X0 X6 X10) \wedge ((X3 = k1_geomtrap X0 X7 X11) \wedge \\
& (r2_geomtrap X0 X1 X2 X4 X5 X6 X7)))))) \Rightarrow (r2_geomtrap X0 X1 X2 X8 X9 X10 \\
& X11))))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((v1_funct_1 X1) \wedge ((v1_funct_2 \\
& X1 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k2_zfmisc_1 X0 X0) X0)))))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k2_zfmisc_1 X0 X0) (k2_zfmisc_1 X0 X0)))))) \Rightarrow (\forall X3. \forall X4. \\
& \forall X5.(g1_geomtrap X0 X1 X2 = g1_geomtrap X3 X4 X5) \Rightarrow ((X0 = X3) \wedge \\
& ((X1 = X4) \wedge (X2 = X5)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
& X0) \wedge (l1_rlvect_1 X0)))))))))) \wedge ((m1_subset_1 X1 (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((\neg v2_struct_0 (k7_geomtrap \\
& X0 X1 X2)) \wedge (v1_geomtrap (k7_geomtrap X0 X1 X2)))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
& X0) \wedge (l1_rlvect_1 X0)))))))))) \wedge ((m1_subset_1 X1 (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((v1_geomtrap (k7_geomtrap \\
& X0 X1 X2)) \wedge (l1_geomtrap (k7_geomtrap X0 X1 X2)))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ &((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ &X0)))))))))) \Rightarrow ((v1_funct_1 (k6_geomtrap X0)) \wedge ((v1_funct_2 (\\ &k6_geomtrap X0) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) \\ &(u1_struct_0 X0)) \wedge (m1_subset_1 (k6_geomtrap X0) (k1_zfmisc_1 \\ &(k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) \\ &(u1_struct_0 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (&((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 \\ &X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\ &((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\ &X0) \wedge (l1_rlvect_1 X0)))))))))) \wedge ((m1_subset_1 X1 (u1_struct_0 \\ &X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k5_geomtrap \\ &X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ &X0) (u1_struct_0 X0)) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ &X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ &((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ &X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ &(\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k7_geomtrap X0 \\ &X1 X2 = g1_geomtrap (u1_struct_0 X0) (k6_geomtrap X0) (k5_geomtrap \\ &X0 X1 X2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ &((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ &X0)))))))))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (\\ &k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0)) \wedge \\ &(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ &X0) (u1_struct_0 X0)) (u1_struct_0 X0)))))) \Rightarrow ((X1 = k6_geomtrap \\ &X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ &(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (k5_binop_1 (u1_struct_0 X0) \\ &X1 X2 X3 = k1_geomtrap X0 X2 X3)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_geomtrap X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow (k9_geomtrap X0 X1 X2 = k5_binop_1 (u1_struct_0 \\ & X0) (u1_midsp_1 X0) X1 X2))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(l1_geomtrap X0) \Rightarrow ((v1_geomtrap X0) \Rightarrow (X0 = g1_geomtrap (u1_struct_0 X0) (u1_midsp_1 X0) (u1_analoaf X0))) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 (k7_geomtrap X0 X1 X2)) \Rightarrow (\forall X4.(m1_subset_1 \\ & X4 (u1_struct_0 (k7_geomtrap X0 X1 X2)) \Rightarrow (\forall X5.(m1_subset_1 \\ & X5 (u1_struct_0 (k7_geomtrap X0 X1 X2)) \Rightarrow (\forall X6.(m1_subset_1 \\ & X6 (u1_struct_0 (k7_geomtrap X0 X1 X2)) \Rightarrow (\forall X7.(m1_subset_1 \\ & X7 (u1_struct_0 (k7_geomtrap X0 X1 X2)) \Rightarrow (\forall X8.(m1_subset_1 \\ & X8 (u1_struct_0 (k7_geomtrap X0 X1 X2)) \Rightarrow (\forall X9.(m1_subset_1 \\ & X9 (u1_struct_0 (k7_geomtrap X0 X1 X2)) \Rightarrow (\forall X10.(m1_subset_1 \\ & X10 (u1_struct_0 (k7_geomtrap X0 X1 X2)) \Rightarrow (\forall X11.(m1_subset_1 \\ & X11 (u1_struct_0 (k7_geomtrap X0 X1 X2)) \Rightarrow (((r2_analoaf (k7_geomtrap \\ & X0 X1 X2) X3 X4 X5 X6) \wedge ((k9_geomtrap (k7_geomtrap X0 X1 X2) X3 X7 = X8) \wedge \\ & ((k9_geomtrap (k7_geomtrap X0 X1 X2) X4 X9 = X8) \wedge ((k9_geomtrap (\\ & k7_geomtrap X0 X1 X2) X5 X10 = X8) \wedge (k9_geomtrap (k7_geomtrap X0 X1 \\ & X2) X6 X11 = X8)))))) \Rightarrow (r2_analoaf (k7_geomtrap X0 X1 X2) X7 X9 X10 X11)))))))))) \end{aligned}$$