

t32_geomtrap
(TMXZ5goCLCfj78f3fpuGVYGwsc7uVggo37W)

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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 $r2_analmetr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((r1_analmetr X0 X3 X4) \Rightarrow ((r2_analmetr X0 X1 X2 X3 X4) \Leftrightarrow (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow (\forall X6.(m1_subset_1 X6 k1_numbers) \Rightarrow (\forall X7.(m1_subset_1 X7 k1_numbers) \Rightarrow (\forall X8.(m1_subset_1 X8 k1_numbers) \Rightarrow (((X1 = k3_rlvect_1 X0 (k1_rlvect_1 X0 X3 X5) (k1_rlvect_1 X0 X4 X6)) \wedge (X2 = k3_rlvect_1 X0 (k1_rlvect_1 X0 X3 X7) (k1_rlvect_1 X0 X4 X8))) \Rightarrow (k7_real_1 (k8_real_1 X5 X7) (k8_real_1 X6 X8) = k6_numbers))))))))))))))
\end{aligned}$$

(1)

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow ((r1_analmetr X0 X1 X2) \Rightarrow (X3 = k3_rlvect_1 \\
& X0 (k1_rlvect_1 X0 X1 (k2_geomtrap X0 X1 X2 X3)) (k1_rlvect_1 X0 X2 \\
& (k3_geomtrap X0 X1 X2 X3)))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0 \\
& X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 \\
& X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 X0)))))))))) \wedge ((m1_subset_1 \\
& X1 (u1_struct_0 X0)) \wedge ((m1_subset_1 X2 (u1_struct_0 X0)) \wedge (m1_subset_1 \\
& X3 (u1_struct_0 X0)))))) \Rightarrow (m1_subset_1 (k3_geomtrap X0 X1 X2 X3) \\
& k1_numbers)
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0 \\
& X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 \\
& X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 X0)))))))))) \wedge ((m1_subset_1 \\
& X1 (u1_struct_0 X0)) \wedge ((m1_subset_1 X2 (u1_struct_0 X0)) \wedge (m1_subset_1 \\
& X3 (u1_struct_0 X0)))))) \Rightarrow (m1_subset_1 (k2_geomtrap X0 X1 X2 X3) \\
& k1_numbers)
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X0)) \Rightarrow (k4_geomtrap X0 X1 X2 X3 X4 = k7_real_1 (k8_real_1 (k2_geomtrap \\
& X0 X1 X2 X3) (k2_geomtrap X0 X1 X2 X4)) (k8_real_1 (k3_geomtrap X0 \\
& X1 X2 X3) (k3_geomtrap X0 X1 X2 X4)))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\
& X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X0)) \Rightarrow ((r2_analmetr X0 X1 X2 X3 X4) \Leftrightarrow (\exists X5.(m1_subset_1 X5 \\
& k1_numbers) \wedge (\exists X6.(m1_subset_1 X6 k1_numbers) \wedge (\exists X7. \\
& (m1_subset_1 X7 k1_numbers) \wedge (\exists X8.(m1_subset_1 X8 k1_numbers) \wedge \\
& ((X1 = k3_rlvect_1 X0 (k1_rlvect_1 X0 X3 X5) (k1_rlvect_1 X0 X4 X6)) \wedge \\
& ((X2 = k3_rlvect_1 X0 (k1_rlvect_1 X0 X3 X7) (k1_rlvect_1 X0 X4 X8)) \wedge \\
& (k7_real_1 (k8_real_1 X5 X7) (k8_real_1 X6 X8) = k6_numbers))))))))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\
& X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
& X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_analmetr \\
& X0 X1 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\
& (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((r2_analmetr X0 X3 X4 X1 X2) \Leftrightarrow \\
& (k4_geomtrap X0 X1 X2 X3 X4 = k6_numbers))))))
\end{aligned}$$