

# t44\_geomtrap (TMGbAGT- gDW3dY5mmbcJ1RUyfxdA3fWDdmc)

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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  $k7\_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_geomtrap : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  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  $l1\_analoaf : \iota \Rightarrow o$  be given. Let  $l1\_midsp\_1 : \iota \Rightarrow o$  be given. Let  $k6\_geomtrap : \iota \Rightarrow \iota$  be given. Let  $u1\_analoaf : \iota \Rightarrow \iota$  be given. Let  $u1\_midsp\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\
& ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge (l1\_rlvect\_1 \\
& X0)))))))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\
& (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 \\
& X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (\forall X6. \\
& (m1\_subset\_1 X6 (u1\_struct\_0 X0)) \Rightarrow ((k1\_domain\_1 (k2\_zfmisc\_1 \\
& (u1\_struct\_0 X0) (u1\_struct\_0 X0)) (k2\_zfmisc\_1 (u1\_struct\_0 \\
& X0) (u1\_struct\_0 X0)) (k1\_domain\_1 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& X0) X1 X2) (k1\_domain\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0) X3 X4) \in \\
& k5\_geomtrap X0 X5 X6) \Leftrightarrow (r2\_geomtrap X0 X5 X6 X1 X2 X3 X4)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((v1\_funct\_1 X1)\wedge((v1\_funct\_2 \\
& X1 (k2\_zfmisc\_1 X0 X0) X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& (k2\_zfmisc\_1 X0 X0) X0))))\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& (k2\_zfmisc\_1 X0 X0) (k2\_zfmisc\_1 X0 X0))))\Rightarrow(\forall X3.\forall X4. \\
& \forall X5.(g1\_geomtrap X0 X1 X2 = g1\_geomtrap X3 X4 X5)\Rightarrow((X0 = X3)\wedge \\
& ((X1 = X4)\wedge(X2 = X5))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge((v13\_algstr\_0 \\
& X0)\wedge((v2\_rlvect\_1 X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge \\
& ((v5\_rlvect\_1 X0)\wedge((v6\_rlvect\_1 X0)\wedge((v7\_rlvect\_1 X0)\wedge((v8\_rlvect\_1 \\
& X0)\wedge(l1\_rlvect\_1 X0))))))))\wedge((m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0))\wedge(m1\_subset\_1 X2 (u1\_struct\_0 X0))))\Rightarrow((\neg v2\_struct\_0 (k7\_geomtrap \\
& X0 X1 X2))\wedge(v1\_geomtrap (k7\_geomtrap X0 X1 X2)))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(l1\_geomtrap X0)\Rightarrow((l1\_analoaf X0)\wedge(l1\_midsp\_1 X0)) \tag{4}$$

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.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v2\_rlvect\_1 \\
& X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge((v5\_rlvect\_1 X0)\wedge \\
& ((v6\_rlvect\_1 X0)\wedge((v7\_rlvect\_1 X0)\wedge((v8\_rlvect\_1 X0)\wedge(l1\_rlvect\_1 \\
& X0))))))))\Rightarrow((v1\_funct\_1 (k6\_geomtrap X0))\wedge((v1\_funct\_2 ( \\
& k6\_geomtrap X0) (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \\
& (u1\_struct\_0 X0))\wedge(m1\_subset\_1 (k6\_geomtrap X0) (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \\
& (u1\_struct\_0 X0))))))
\end{aligned} \tag{6}$$

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.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_analoaf X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow \\ & (\forall X4. (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow ((r2\_analoaf X0 \\ & X1 X2 X3 X4) \Leftrightarrow (k1\_domain\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X0)) (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) (k1\_domain\_1 \\ & (u1\_struct\_0 X0) (u1\_struct\_0 X0) X1 X2) (k1\_domain\_1 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X0) X3 X4) \in u1\_analoaf X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (l1\_geomtrap X0) \Rightarrow ((v1\_geomtrap X0) \Rightarrow (X0 = g1\_geomtrap (u1\_struct\_0 X0) (u1\_midsp\_1 X0) (u1\_analoaf X0))) \quad (10)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge (l1\_rlvect\_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 \\ & X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (\forall X6. \\ & (m1\_subset\_1 X6 (u1\_struct\_0 X0)) \Rightarrow (\forall X7.(m1\_subset\_1 X7 \\ & (u1\_struct\_0 (k7\_geomtrap X0 X5 X6)) \Rightarrow (\forall X8.(m1\_subset\_1 \\ & X8 (u1\_struct\_0 (k7\_geomtrap X0 X5 X6)) \Rightarrow (\forall X9.(m1\_subset\_1 \\ & X9 (u1\_struct\_0 (k7\_geomtrap X0 X5 X6)) \Rightarrow (\forall X10.(m1\_subset\_1 \\ & X10 (u1\_struct\_0 (k7\_geomtrap X0 X5 X6)) \Rightarrow (((X1 = X7) \wedge ((X2 = X8) \wedge \\ & ((X3 = X9) \wedge (X4 = X10)))) \Rightarrow ((r2\_analoaf (k7\_geomtrap X0 X5 X6) X7 X8 \\ & X9 X10) \Leftrightarrow (r2\_geomtrap X0 X5 X6 X1 X2 X3 X4)))))))))) \end{aligned}$$