

t43_lopban_1 (TMXRx-
cxm58H76BGB44ZLMWgtAp9X4PJ6n4Y)

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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 $v3_normsp_0 : \iota \Rightarrow o$ be given. Let $v4_normsp_0 : \iota \Rightarrow o$ be given. Let $v2_normsp_1 : \iota \Rightarrow o$ be given. Let $l1_normsp_1 : \iota \Rightarrow o$ be given. Let $v3_lopban_1 : \iota \Rightarrow o$ be given. Let $k16_lopban_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_rssize3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_normsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v3_normsp_0 \\
& X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))))))) \Rightarrow \\
& (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge \\
& ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 \\
& X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow \\
& ((v3_lopban_1 X1) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 k5_numbers (u1_struct_0 (k16_lopban_1 X0 X1))) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 (k16_lopban_1 \\
& X0 X1)))))) \Rightarrow ((v1_rssize3 X2 (k16_lopban_1 X0 X1)) \Rightarrow (v3_normsp_1 \\
& X2 (k16_lopban_1 X0 X1))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge \\
& ((v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 \\
& X0) \wedge (v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge \\
& ((v3_normsp_0 X0) \wedge (v4_normsp_0 X0) \wedge (v2_normsp_1 X0) \wedge (l1_normsp_1 \\
& X0)))))) \wedge ((\neg v2_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v2_rlvect_1 \\
& X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge (v5_rlvect_1 X1) \wedge \\
& ((v6_rlvect_1 X1) \wedge (v7_rlvect_1 X1) \wedge (v8_rlvect_1 X1) \wedge (v3_normsp_0 \\
& X1) \wedge (v4_normsp_0 X1) \wedge (v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))) \Rightarrow \\
& ((\neg v2_struct_0 (k16_lopban_1 X0 X1)) \wedge (v13_algstr_0 (k16_lopban_1 \\
& X0 X1)) \wedge (v2_rlvect_1 (k16_lopban_1 X0 X1)) \wedge (v3_rlvect_1 (k16_lopban_1 \\
& X0 X1)) \wedge (v4_rlvect_1 (k16_lopban_1 X0 X1)) \wedge (v5_rlvect_1 (k16_lopban_1 \\
& X0 X1)) \wedge (v6_rlvect_1 (k16_lopban_1 X0 X1)) \wedge (v7_rlvect_1 (k16_lopban_1 \\
& X0 X1)) \wedge (v8_rlvect_1 (k16_lopban_1 X0 X1)) \wedge (v3_normsp_0 (k16_lopban_1 \\
& X0 X1)) \wedge (v4_normsp_0 (k16_lopban_1 X0 X1)) \wedge (v2_normsp_1 (k16_lopban_1 \\
& X0 X1))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge \\
& ((v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 \\
& X0) \wedge (v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge \\
& ((v3_normsp_0 X0) \wedge (v4_normsp_0 X0) \wedge (v2_normsp_1 X0) \wedge (l1_normsp_1 \\
& X0)))))) \wedge ((\neg v2_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v2_rlvect_1 \\
& X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge (v5_rlvect_1 X1) \wedge \\
& ((v6_rlvect_1 X1) \wedge (v7_rlvect_1 X1) \wedge (v8_rlvect_1 X1) \wedge (v3_normsp_0 \\
& X1) \wedge (v4_normsp_0 X1) \wedge (v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))) \Rightarrow \\
& ((\neg v2_struct_0 (k16_lopban_1 X0 X1)) \wedge (l1_normsp_1 (k16_lopban_1 \\
& X0 X1)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\
& X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (v3_normsp_0 \\
& X0) \wedge (v4_normsp_0 X0) \wedge (v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))) \Rightarrow \\
& ((v3_lopban_1 X0) \Leftrightarrow (\forall X1. ((v1_funct_1 X1) \wedge (v1_funct_2 \\
& X1 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow ((v1_rsspace3 \\
& X1 X0) \Rightarrow (v3_normsp_1 X1 X0)))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v3_normsp_0 \\
& X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge \\
& ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 \\
& X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge ((v3_lopban_1 X1) \wedge \\
& (l1_normsp_1 X1)))))))))) \Rightarrow ((\neg v2_struct_0 (k16_lopban_1 \\
& X0 X1)) \wedge ((v13_algstr_0 (k16_lopban_1 X0 X1)) \wedge ((v2_rlvect_1 (\\
& k16_lopban_1 X0 X1)) \wedge ((v3_rlvect_1 (k16_lopban_1 X0 X1)) \wedge ((v4_rlvect_1 \\
& (k16_lopban_1 X0 X1)) \wedge ((v5_rlvect_1 (k16_lopban_1 X0 X1)) \wedge ((\\
& v6_rlvect_1 (k16_lopban_1 X0 X1)) \wedge ((v7_rlvect_1 (k16_lopban_1 \\
& X0 X1)) \wedge ((v8_rlvect_1 (k16_lopban_1 X0 X1)) \wedge ((v3_normsp_0 (k16_lopban_1 \\
& X0 X1)) \wedge ((v4_normsp_0 (k16_lopban_1 X0 X1)) \wedge ((v2_normsp_1 (k16_lopban_1 \\
& X0 X1)) \wedge ((v3_lopban_1 (k16_lopban_1 X0 X1)) \wedge (l1_normsp_1 (k16_lopban_1 \\
& X0 X1)))))))))))))
\end{aligned}$$