

t14_clopban1 (TMaWBBn- HCn5T6YSRcqCoUsJbgqVo7sLvH79)

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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 $v2_clvect_1 : \iota \Rightarrow o$ be given. Let $v3_clvect_1 : \iota \Rightarrow o$ be given. Let $v4_clvect_1 : \iota \Rightarrow o$ be given. Let $v5_clvect_1 : \iota \Rightarrow o$ be given. Let $l1_clvect_1 : \iota \Rightarrow o$ be given. Let $m1_clvect_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_clvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_clopban1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_csspace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_clopban1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k8_csspace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_csspace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_clvect_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v4_funct_1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_monoid_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge (l1_clvect_1 X0)))))))))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v2_clvect_1 X1) \wedge ((v3_clvect_1 X1) \wedge ((v4_clvect_1 X1) \wedge ((v5_clvect_1 X1) \wedge (l1_clvect_1 X1)))))))))) \Rightarrow (v6_clvect_1 (k5_clopban1 X0 X1) (k3_clopban1 (u1_struct_0 X0) X1)))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge (l1_clvect_1 X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v6_clvect_1 X1 X0) \Rightarrow ((v1_xboole_0 X1) \vee (m1_clvect_1 (g1_clvect_1 X1 (k10_csspace X0 X1) (k8_csspace X0 X1) (k9_csspace X0 X1)) X0))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge \\ & ((v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v2_clvect_1 \\ & X0) \wedge (v3_clvect_1 X0) \wedge (v4_clvect_1 X0) \wedge (v5_clvect_1 X0) \wedge \\ & (l1_clvect_1 X0)))))) \wedge ((\neg v2_struct_0 X1) \wedge (v13_algstr_0 \\ & X1) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge \\ & (v2_clvect_1 X1) \wedge (v3_clvect_1 X1) \wedge (v4_clvect_1 X1) \wedge (v5_clvect_1 \\ & X1) \wedge (l1_clvect_1 X1)))))) \Rightarrow ((\neg v1_xboole_0 (k5_clopan1 \\ & X0 X1)) \wedge (v4_funct_1 (k5_clopan1 X0 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v2_struct_0 X1) \wedge \\ & ((v13_algstr_0 X1) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 \\ & X1) \wedge (v2_clvect_1 X1) \wedge (v3_clvect_1 X1) \wedge (v4_clvect_1 X1) \wedge \\ & (v5_clvect_1 X1) \wedge (l1_clvect_1 X1)))))) \Rightarrow ((\neg v2_struct_0 \\ & (k3_clopan1 X0 X1)) \wedge (v13_algstr_0 (k3_clopan1 X0 X1)) \wedge (v2_rlvect_1 \\ & (k3_clopan1 X0 X1)) \wedge (v3_rlvect_1 (k3_clopan1 X0 X1)) \wedge (v4_rlvect_1 \\ & (k3_clopan1 X0 X1)) \wedge (v1_monoid_0 (k3_clopan1 X0 X1)) \wedge (v2_clvect_1 \\ & (k3_clopan1 X0 X1)) \wedge (v3_clvect_1 (k3_clopan1 X0 X1)) \wedge (v4_clvect_1 \\ & (k3_clopan1 X0 X1)) \wedge (v5_clvect_1 (k3_clopan1 X0 X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0. (l1_clvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (7)$$

Assume the following.

$$\forall X0. (l1_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge \\ & ((v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v2_clvect_1 \\ & X0) \wedge (v3_clvect_1 X0) \wedge (v4_clvect_1 X0) \wedge (v5_clvect_1 X0) \wedge \\ & (l1_clvect_1 X0)))))) \wedge ((\neg v2_struct_0 X1) \wedge (v13_algstr_0 \\ & X1) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge \\ & (v2_clvect_1 X1) \wedge (v3_clvect_1 X1) \wedge (v4_clvect_1 X1) \wedge (v5_clvect_1 \\ & X1) \wedge (l1_clvect_1 X1)))))) \Rightarrow (m1_subset_1 (k5_clopan1 X0 \\ & X1) (k1_zfmisc_1 (u1_struct_0 (k3_clopan1 (u1_struct_0 X0) X1)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (\neg v2_struct_0 X1) \wedge \\
& ((v13_algstr_0 X1) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 \\
& X1) \wedge (v2_clvect_1 X1) \wedge (v3_clvect_1 X1) \wedge (v4_clvect_1 X1) \wedge \\
& (v5_clvect_1 X1) \wedge (l1_clvect_1 X1)))))) \Rightarrow ((\neg v2_struct_0 \\
& (k3_clopan1 X0 X1)) \wedge (v13_algstr_0 (k3_clopan1 X0 X1)) \wedge (v2_rlvect_1 \\
& (k3_clopan1 X0 X1)) \wedge (v3_rlvect_1 (k3_clopan1 X0 X1)) \wedge (v4_rlvect_1 \\
& (k3_clopan1 X0 X1)) \wedge (v2_clvect_1 (k3_clopan1 X0 X1)) \wedge (v3_clvect_1 \\
& (k3_clopan1 X0 X1)) \wedge (v4_clvect_1 (k3_clopan1 X0 X1)) \wedge (v5_clvect_1 \\
& (k3_clopan1 X0 X1)) \wedge (l1_clvect_1 (k3_clopan1 X0 X1))))))
\end{aligned} \tag{10}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\
& X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v2_clvect_1 X0) \wedge \\
& ((v3_clvect_1 X0) \wedge (v4_clvect_1 X0) \wedge (v5_clvect_1 X0) \wedge (l1_clvect_1 \\
& X0)))))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge (v13_algstr_0 \\
& X1) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge \\
& ((v2_clvect_1 X1) \wedge (v3_clvect_1 X1) \wedge (v4_clvect_1 X1) \wedge (v5_clvect_1 \\
& X1) \wedge (l1_clvect_1 X1)))))) \Rightarrow (m1_clvect_1 (g1_clvect_1 (k5_clopan1 \\
& X0 X1) (k10_csspace (k3_clopan1 (u1_struct_0 X0) X1) (k5_clopan1 \\
& X0 X1)) (k8_csspace (k3_clopan1 (u1_struct_0 X0) X1) (k5_clopan1 \\
& X0 X1)) (k9_csspace (k3_clopan1 (u1_struct_0 X0) X1) (k5_clopan1 \\
& X0 X1))) (k3_clopan1 (u1_struct_0 X0) X1)))
\end{aligned}$$