

t87_clvect_1

(TMc5AGw7fUEzS3H6dJMaAbtnNxLktum48wH)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_clvect_1 : \iota \Rightarrow o$ be given. Let $m1_clvect_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_clvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge (l1_clvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_clvect_1 \\ & X3 X0) \Rightarrow ((k3_rlvect_1 X0 X1 X2 \in k5_clvect_1 X0 X2 X3) \Leftrightarrow (r1_struct_0 \\ & X3 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge (l1_clvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1. ((v1_clvect_1 X1) \wedge (m1_clvect_1 X1 \\ & X0)) \Rightarrow (\forall X2. ((v1_clvect_1 X2) \wedge (m1_clvect_1 X2 X0)) \Rightarrow ((\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r1_struct_0 X1 X3) \Leftrightarrow (r1_struct_0 \\ & X2 X3)))) \Rightarrow (X1 = X2)))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge (v4_clvect_1 X0) \wedge (v5_clvect_1 X0) \wedge (l1_clvect_1 \\ & X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.((v1_clvect_1 X2) \wedge (m1_clvect_1 X2 X0)) \Rightarrow (\forall X3. \\ & ((v1_clvect_1 X3) \wedge (m1_clvect_1 X3 X0)) \Rightarrow ((k5_clvect_1 X0 X1 X2 = \\ & k5_clvect_1 X0 X1 X3) \Leftrightarrow (X2 = X3)))))) \end{aligned}$$