

l37_clvect_2 (TMcEn- DATaUFRzBb7LAAWsPz7TMJQtVcxFR4)

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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 $v2_csspace : \iota \Rightarrow o$ be given. Let $l1_csspace : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_clvect_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_clvect_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_clvect_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_bhsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_seq_2 : \iota \Rightarrow \iota$ be given. Let $k13_csspace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_clvect_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
 & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\
 & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\
 & X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (\\
 & u1_struct_0 X0)) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\
 & X2 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow ((v1_clvect_2 \\
 & X2 X0) \Rightarrow (v1_clvect_2 (k5_bhsp_1 X0 X2 X1) X0))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
 & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\
 & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\
 & X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (\\
 & u1_struct_0 X0)) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\
 & X2 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow (((v1_clvect_2 \\
 & X2 X0) \wedge (k1_clvect_2 X0 X2 = X1)) \Rightarrow ((v2_comseq_2 (k2_clvect_2 X0 \\
 & X2)) \wedge (k2_seq_2 (k2_clvect_2 X0 X2) = k13_csspace X0 X1))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\ & X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X1 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\ & ((v1_clvect_2 X1 X0) \Rightarrow (v2_comseq_2 (k2_clvect_2 X0 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\ & X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (\\ & u1_struct_0 X0)) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow ((v1_clvect_2 \\ & X2 X0) \Rightarrow (k1_clvect_2 X0 (k5_bhspace_1 X0 X2 X1) = k3_rlvect_1 X0 (k1_clvect_2 \\ & X0 X2) X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(l1_csspace X0) \Rightarrow (l1_clvect_1 X0) \quad (5)$$

Assume the following.

$$\forall X0.(l1_clvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l2_algstr_0 \\ & X0)) \wedge (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 \\ & X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\ & X0)))))) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((v1_funct_1 (\\ & k5_bhspace_1 X0 X1 X2)) \wedge ((v1_funct_2 (k5_bhspace_1 X0 X1 X2) k5_numbers \\ & (u1_struct_0 X0)) \wedge (m1_subset_1 (k5_bhspace_1 X0 X1 X2) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge \\ & ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 \\ & X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge \\ & ((v2_csspace X0) \wedge (l1_csspace X0)))))))))) \wedge ((v1_funct_1 X1) \wedge \\ & ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X1 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\ & (m1_subset_1 (k1_clvect_2 X0 X1) (u1_struct_0 X0)) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\ & X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (\\ & u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers (u1_struct_0 \\ & X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\ & X0)))))) \Rightarrow (((v1_clvect_2 X3 X0) \wedge (k1_clvect_2 X0 X3 = X1)) \Rightarrow ((v2_comseq_2 \\ & (k2_clvect_2 X0 (k5_bhsp_1 X0 X3 X2))) \wedge (k2_seq_2 (k2_clvect_2 \\ & X0 (k5_bhsp_1 X0 X3 X2)) = k13_csspace X0 (k3_rlvect_1 X0 X1 X2)))))) \end{aligned}$$