

t16_clvect_2

(TMH1T3v3EoKdceQUjQ7zq7NR3nDfMwh2bTZ)

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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 $v1_funct_1 : \iota \Rightarrow o$ 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 $v1_clvect_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_clvect_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_vfunct_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_clvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_complex1 : \iota \Rightarrow \iota$ be given. Let $k6_complex1 : \iota$ be given. Let $l1_clvect_1 : \iota \Rightarrow o$ be given. Let $k1_clvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_numbers : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
 & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\
 & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\
 & X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\
 & ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X1 \\
 & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\
 & (r2_funct_2 k5_numbers (u1_struct_0 X0) (k6_clvect_1 X0 X1 (k10_complex1 \\
 & k6_complex1)) (k5_vfunct_1 k5_numbers X0 X1)))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge (l1_clvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (k4_algstr_0 X0 X1 = k1_clvect_1 X0 X1 (k10_complex1 k6_complex1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\ & X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 \\ & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\ & X0)))))) \Rightarrow ((v1_clvect_2 X2 X0) \Rightarrow (k1_clvect_2 X0 (k6_clvect_1 X0 \\ & X2 X1) = k1_clvect_1 X0 (k1_clvect_2 X0 X2) X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (k10_complex1 X0 = k4_xcmplx_0 X0) \quad (6)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (((\neg v2_struct_0 \\ & X1) \wedge (l2_algstr_0 X1)) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 \\ & X1)))))))) \Rightarrow ((v1_funct_1 (k5_vfunct_1 X0 X1 X2)) \wedge (v1_partfun1 \\ & (k5_vfunct_1 X0 X1 X2) X0)) \end{aligned} \quad (8)$$

Assume the following.

$$v1_membered\ k2_numbers \quad (9)$$

Assume the following.

$$\forall X0.(l1_csspace\ X0) \Rightarrow (l1_clvect_1\ X0) \quad (10)$$

Assume the following.

$$\forall X0.(l1_clvect_1\ X0) \Rightarrow (l2_algstr_0\ X0) \quad (11)$$

Assume the following.

$$m1_subset_1\ k6_complex1\ k2_numbers \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0\ X0) \wedge ((v13_algstr_0 \\ & X0) \wedge (v2_rlvect_1\ X0) \wedge (v3_rlvect_1\ X0) \wedge (v4_rlvect_1\ X0) \wedge \\ & ((v2_clvect_1\ X0) \wedge (v3_clvect_1\ X0) \wedge (v4_clvect_1\ X0) \wedge (v5_clvect_1 \\ & X0) \wedge (l1_clvect_1\ X0)))))) \wedge (((v1_funct_1\ X1) \wedge (v1_funct_2 \\ & X1\ k5_numbers\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ X0)))))) \wedge (v1_xcmplx_0 \\ & X2)) \Rightarrow ((v1_funct_1\ (k6_clvect_1\ X0\ X1\ X2)) \wedge ((v1_funct_2\ (k6_clvect_1 \\ & X0\ X1\ X2)\ k5_numbers\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ (k6_clvect_1 \\ & X0\ X1\ X2)\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ X0)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0\ X0) \wedge (((\neg v2_struct_0 \\ & X1) \wedge (l2_algstr_0\ X1)) \wedge ((v1_funct_1\ X2) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ (u1_struct_0\ X1)))))) \Rightarrow ((v1_funct_1\ (k5_vfunct_1 \\ & X0\ X1\ X2)) \wedge (m1_subset_1\ (k5_vfunct_1\ X0\ X1\ X2)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ (u1_struct_0\ X1)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0\ X0) \Rightarrow (v1_xcmplx_0\ (k4_xcmplx_0\ X0)) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0\ X0) \wedge ((v13_algstr_0\ X0) \wedge \\ & ((v2_rlvect_1\ X0) \wedge (v3_rlvect_1\ X0) \wedge (v4_rlvect_1\ X0) \wedge (v2_clvect_1 \\ & X0) \wedge (v3_clvect_1\ X0) \wedge (v4_clvect_1\ X0) \wedge (v5_clvect_1\ X0) \wedge \\ & ((v2_csspace\ X0) \wedge (l1_csspace\ X0)))))) \wedge ((v1_funct_1\ X1) \wedge \\ & ((v1_funct_2\ X1\ k5_numbers\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ X1 \\ & (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ X0)))))) \Rightarrow \\ & (m1_subset_1\ (k1_clvect_2\ X0\ X1)\ (u1_struct_0\ X0)) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow((v1_partfun1 X2 X0)\Rightarrow(v1_funct_2 X2 X0 X1)) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow \\ & (v1_xcmplx_0 X1)) \end{aligned} \quad (18)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 \\ & X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v2_clvect_1 X0)\wedge \\ & ((v3_clvect_1 X0)\wedge((v4_clvect_1 X0)\wedge((v5_clvect_1 X0)\wedge((v2_csspace \\ & X0)\wedge(l1_csspace X0))))))))))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge \\ & ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0))\wedge(m1_subset_1 X1 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0))))))\Rightarrow \\ & ((v1_clvect_2 X1 X0)\Rightarrow(k1_clvect_2 X0 (k5_vfunct_1 k5_numbers \\ & X0 X1) = k4_algstr_0 X0 (k1_clvect_2 X0 X1)))) \end{aligned}$$