

t33_clvect_1

(TMN1beEJcwda6s6ZB75rp9T6iRwsACWeqep)

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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 $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $m1_clvect_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_clvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $u1_clvect_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k1_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 \\ & X2)) \Rightarrow ((X0 \in X1) \Rightarrow (k1_funct_1 (k5_relat_1 X2 X1) X0 = k1_funct_1 X2 \\ & X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k2_partfun1 X0 X1 X2 X3 = k5_relat_1 X2 X3) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge ((\neg v1_xboole_0 X1)\wedge((m1_subset_1 X2 X0)\wedge(m1_subset_1 X3 X1))))\Rightarrow (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \quad (5)$$

Assume the following.

$$\neg v1_finset_1 k2_numbers \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (7)$$

Assume the following.

$$\neg v1_xboole_0 k2_numbers \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_finset_1 X0)\wedge(\neg v1_xboole_0 X1))\Rightarrow (\neg v1_finset_1 (k2_zfmisc_1 X0 X1)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_clvect_1 X0)\Rightarrow((v1_funct_1 (u1_clvect_1 X0))\wedge ((v1_funct_2 (u1_clvect_1 X0) (k2_zfmisc_1 k2_numbers (u1_struct_0 X0)) (u1_struct_0 X0))\wedge(m1_subset_1 (u1_clvect_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k2_numbers (u1_struct_0 X0)) (u1_struct_0 X0)))))) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v2_clvect_1 X0)\wedge((v3_clvect_1 X0)\wedge((v4_clvect_1 X0)\wedge((v5_clvect_1 X0)\wedge(l1_clvect_1 X0))))))))))\Rightarrow(\forall X1.(m1_clvect_1 X1 X0)\Rightarrow((\neg v2_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge((v2_rlvect_1 X1)\wedge((v3_rlvect_1 X1)\wedge((v4_rlvect_1 X1)\wedge((v2_clvect_1 X1)\wedge((v3_clvect_1 X1)\wedge((v4_clvect_1 X1)\wedge((v5_clvect_1 X1)\wedge(l1_clvect_1 X1)))))))))) \quad (11)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(l1_struct_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l1_clvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow \\ & (m1_subset_1 (k1_domain_1 X0 X1 X2 X3) (k2_zfmisc_1 X0 X1)) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge (l1_clvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 \\ & X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge \\ & ((v2_clvect_1 X1) \wedge ((v3_clvect_1 X1) \wedge ((v4_clvect_1 X1) \wedge ((v5_clvect_1 \\ & X1) \wedge (l1_clvect_1 X1)))))))))) \Rightarrow ((m1_clvect_1 X1 X0) \Leftrightarrow ((r1_tarSKI \\ & (u1_struct_0 X1) (u1_struct_0 X0)) \wedge ((k4_struct_0 X1 = k4_struct_0 \\ & X0) \wedge ((u1_algstr_0 X1 = k1_realset1 (u1_algstr_0 X0) (u1_struct_0 \\ & X1)) \wedge (u1_clvect_1 X1 = k2_partfun1 (k2_zfmisc_1 k2_numbers (u1_struct_0 \\ & X0)) (u1_struct_0 X0) (u1_clvect_1 X0) (k2_zfmisc_1 k2_numbers \\ & (u1_struct_0 X1)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarSKI X0 X1 = k2_tarSKI (k2_tarSKI X0 X1) (k1_tarSKI X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Leftrightarrow (X0 \in k2_numbers) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_clvect_1 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(v1_xcmplx_0 X2) \Rightarrow \\ & (k1_clvect_1 X0 X1 X2 = k1_funct_1 (u1_clvect_1 X0) (k4_tarSKI X2 \\ & X1)))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarSKI X0 X1 = k2_tarSKI X1 X0 \quad (20)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v7_ordinal1 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_finset_1 X0) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (23)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge (l1_clvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.(v1_xcmplx_0 X2) \Rightarrow (\forall X3.(m1_clvect_1 X3 X0) \Rightarrow \\ & (\forall X4.(m1_subset_1 X4 (u1_struct_0 X3)) \Rightarrow ((X4 = X1) \Rightarrow (k1_clvect_1 \\ & X3 X4 X2 = k1_clvect_1 X0 X1 X2)))))) \end{aligned}$$