

## t44\_clvect\_1

(TMXq3dabygaaTUcHyseRxxzNkBtXbhw8nhzD)

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $k2\_numbers : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $u1\_algstr\_0 : \iota \Rightarrow \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1\_subset\_1 X3 ( \\ & k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X0))) \Rightarrow ((r1\_tarski X1 X2) \Rightarrow (r2\_relset\_1 \\ & X1 X0 (k5\_relset\_1 X1 X0 X3 X2) X3)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1\_subset\_1 X2 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))) \Rightarrow ((r2\_relset\_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1\_subset\_1 X2 ( \\ & k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (k5\_relset\_1 X0 X1 X2 X3 = k5\_relat\_1 \\ & X2 X3) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(k2\_partfun1 \\ & X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_clvect\_1 X0)\Rightarrow((v1\_funct\_1 (u1\_clvect\_1 X0))\wedge \\ & ((v1\_funct\_2 (u1\_clvect\_1 X0) (k2\_zfmisc\_1 k2\_numbers (u1\_struct\_0 \\ & X0)) (u1\_struct\_0 X0))\wedge(m1\_subset\_1 (u1\_clvect\_1 X0) (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k2\_zfmisc\_1 k2\_numbers (u1\_struct\_0 X0)) (u1\_struct\_0 \\ & X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_algstr\_0 X0)\Rightarrow((v1\_funct\_1 (u1\_algstr\_0 X0))\wedge \\ & ((v1\_funct\_2 (u1\_algstr\_0 X0) (k2\_zfmisc\_1 (u1\_struct\_0 X0) ( \\ & u1\_struct\_0 X0)) (u1\_struct\_0 X0))\wedge(m1\_subset\_1 (u1\_algstr\_0 \\ & X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) ( \\ & u1\_struct\_0 X0)) (u1\_struct\_0 X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0)\Rightarrow((l2\_struct\_0 X0)\wedge(l1\_algstr\_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l1\_clvect\_1 X0)\Rightarrow(l2\_algstr\_0 X0) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow((v1\_funct\_1 \\ & (k2\_partfun1 X0 X1 X2 X3))\wedge(m1\_subset\_1 (k2\_partfun1 X0 X1 X2 X3) \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v2\_rlvect\_1 \\ & X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge((v2\_clvect\_1 X0)\wedge \\ & ((v3\_clvect\_1 X0)\wedge((v4\_clvect\_1 X0)\wedge((v5\_clvect\_1 X0)\wedge(l1\_clvect\_1 \\ & X0))))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0 X1)\wedge((v13\_algstr\_0 \\ & X1)\wedge((v2\_rlvect\_1 X1)\wedge((v3\_rlvect\_1 X1)\wedge((v4\_rlvect\_1 X1)\wedge \\ & ((v2\_clvect\_1 X1)\wedge((v3\_clvect\_1 X1)\wedge((v4\_clvect\_1 X1)\wedge((v5\_clvect\_1 \\ & X1)\wedge(l1\_clvect\_1 X1))))))))))\Rightarrow((m1\_clvect\_1 X1 X0)\Leftrightarrow((r1\_tarSKI \\ & (u1\_struct\_0 X1) (u1\_struct\_0 X0))\wedge((k4\_struct\_0 X1 = k4\_struct\_0 \\ & X0)\wedge((u1\_algstr\_0 X1 = k1\_realset1 (u1\_algstr\_0 X0) (u1\_struct\_0 \\ & X1))\wedge(u1\_clvect\_1 X1 = k2\_partfun1 (k2\_zfmisc\_1 k2\_numbers (u1\_struct\_0 \\ & X0)) (u1\_struct\_0 X0) (u1\_clvect\_1 X0) (k2\_zfmisc\_1 k2\_numbers \\ & (u1\_struct\_0 X1)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.k1\_realset1 X0 X1 = k5\_relat\_1 X0 (k2\_zfmisc\_1 X1 X1)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \quad (13)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (v13\_algstr\_0 X0) \wedge (v2\_rlvect\_1 X0) \wedge (v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0) \wedge (v2\_clvect\_1 X0) \wedge ((v3\_clvect\_1 X0) \wedge (v4\_clvect\_1 X0) \wedge (v5\_clvect\_1 X0) \wedge (l1\_clvect\_1 X0)))))) \Rightarrow (m1\_clvect\_1 X0 X0)$$