

# t75\_clvect\_2 (TMSLRwzbQVAdditjwhDhFb- sRiZNoGC8vRoP)

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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  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  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  $v3\_clvect\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_vfunct\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_csspace : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k1\_normsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l1\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 X0) \wedge \\ & ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge ((v2\_csspace \\ & X0) \wedge (l1\_csspace X0)))))))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 ( \\ & u1\_struct\_0 X0)) \Rightarrow (k13\_csspace X0 (k4\_algstr\_0 X0 X1) = k13\_csspace \\ & X0 X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 X1) \wedge (l2\_algstr\_0 X1)) \Rightarrow (\forall X2. ((v1\_funct\_1 \\ & X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X1)))))) \Rightarrow \\ & (k1\_normsp\_1 X1 (k5\_vfunct\_1 k5\_numbers X1 X2) X0 = k4\_algstr\_0 \\ & X1 (k1\_normsp\_1 X1 X2 X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\wedge(((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0))\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0))))))\wedge(m1\_subset\_1 X2 k5\_numbers)))\Rightarrow(k1\_normsp\_1 X0 X1 X2 = k1\_funct\_1 X1 X2) \quad (5)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1\_xboole\_0 X0)\wedge(((\neg v2\_struct\_0 X1)\wedge(l2\_algstr\_0 X1))\wedge((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 X0 (u1\_struct\_0 X1))\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 (u1\_struct\_0 X1))))))))\Rightarrow((v1\_funct\_1 (k5\_vfunct\_1 X0 X1 X2))\wedge(v1\_partfun1 (k5\_vfunct\_1 X0 X1 X2) X0)) \quad (7)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (8)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0)\Rightarrow((l2\_struct\_0 X0)\wedge(l1\_algstr\_0 X0)) \quad (9)$$

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.

$$\forall X0.(l1\_algstr\_0 X0)\Rightarrow(l1\_struct\_0 X0) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge(((\neg v2\_struct\_0 \\ & X1)\wedge(l2\_algstr\_0 X1))\wedge((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 (u1\_struct\_0 X1)))))))\Rightarrow((v1\_funct\_1 (k5\_vfunct\_1 \\ & X0 X1 X2))\wedge(m1\_subset\_1 (k5\_vfunct\_1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 (u1\_struct\_0 X1)))))) \end{aligned} \quad (13)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge(l1\_struct\_0 \\ & X0))\wedge(((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 \\ & X0))\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ & X0))))))\wedge(m1\_subset\_1 X2 k5\_numbers)))\Rightarrow(m1\_subset\_1 (k1\_normsp\_1 \\ & X0 X1 X2) (u1\_struct\_0 X0)) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v2\_rlvect\_1 \\ & X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge((v2\_clvect\_1 X0)\wedge \\ & ((v3\_clvect\_1 X0)\wedge((v4\_clvect\_1 X0)\wedge((v5\_clvect\_1 X0)\wedge((v2\_csspace \\ & X0)\wedge(l1\_csspace X0))))))))))\Rightarrow(\forall X1.((v1\_funct\_1 X1)\wedge \\ & ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0))\wedge(m1\_subset\_1 X1 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0))))))\Rightarrow \\ & ((v3\_clvect\_2 X1 X0)\Leftrightarrow(\exists X2.(m1\_subset\_1 X2 k1\_numbers)\wedge \\ & ((\neg r1\_xxreal\_0 X2 k6\_numbers)\wedge(\forall X3.(m2\_subset\_1 X3 k1\_numbers \\ & k5\_numbers)\Rightarrow(r1\_xxreal\_0 (k13\_csspace X0 (k1\_normsp\_1 X0 X1 X3) \\ & X2)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v1\_partfun1 X2 X0)\Rightarrow(v1\_funct\_2 X2 X0 X1)) \end{aligned} \quad (17)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v2\_rlvect\_1 \\ & X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge((v2\_clvect\_1 X0)\wedge \\ & ((v3\_clvect\_1 X0)\wedge((v4\_clvect\_1 X0)\wedge((v5\_clvect\_1 X0)\wedge((v2\_csspace \\ & X0)\wedge(l1\_csspace X0))))))))))\Rightarrow(\forall X1.((v1\_funct\_1 X1)\wedge \\ & ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0))\wedge(m1\_subset\_1 X1 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0))))))\Rightarrow \\ & ((v3\_clvect\_2 X1 X0)\Rightarrow(v3\_clvect\_2 (k5\_vfunct\_1 k5\_numbers X0 \\ & X1) X0))) \end{aligned}$$