

## t100\_clvect\_1

(TMZueV1XGnetbvJSx3Bn9EV3Mx3FBWFJgDc)

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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  $m1\_clvect\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_clvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_clvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
 & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 X0) \wedge \\
 & ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge (l1\_clvect\_1 \\
 & X0)))))))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\
 & (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_clvect\_1 \\
 & X3 X0) \Rightarrow ((\exists X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \wedge ((X1 \in k5\_clvect\_1 \\
 & X0 X4 X3) \wedge (X2 \in k5\_clvect\_1 X0 X4 X3))) \Leftrightarrow (r1\_struct\_0 X3 (k5\_algstr\_0 \\
 & X0 X1 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge \\
 & ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 \\
 & X0) \wedge ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge \\
 & (l1\_clvect\_1 X0)))))))))) \wedge (m1\_clvect\_1 X1 X0)) \Rightarrow (\forall X2. \\
 & (m2\_clvect\_1 X2 X0 X1) \Rightarrow (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\
 & X0))))
 \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (v13\_algstr\_0 \\
& X0) \wedge (v2\_rlvect\_1 X0) \wedge (v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0) \wedge \\
& ((v2\_clvect\_1 X0) \wedge (v3\_clvect\_1 X0) \wedge (v4\_clvect\_1 X0) \wedge (v5\_clvect\_1 \\
& X0) \wedge (l1\_clvect\_1 X0)))))) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0)) \wedge (m1\_clvect\_1 X2 X0)) \Rightarrow (m1\_subset\_1 (k5\_clvect\_1 X0 X1 X2) \\
& (k1\_zfmisc\_1 (u1\_struct\_0 X0)))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge (v13\_algstr\_0 X0) \wedge (v2\_rlvect\_1 \\
& X0) \wedge (v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0) \wedge (v2\_clvect\_1 X0) \wedge \\
& ((v3\_clvect\_1 X0) \wedge (v4\_clvect\_1 X0) \wedge (v5\_clvect\_1 X0) \wedge (l1\_clvect\_1 \\
& X0)))))) \Rightarrow (\forall X1. (m1\_clvect\_1 X1 X0) \Rightarrow (\forall X2. (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)) \Rightarrow ((m2\_clvect\_1 X2 X0 X1) \Leftrightarrow (\exists X3. \\
& (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \wedge (X2 = k5\_clvect\_1 X0 X3 X1))))))
\end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge (v13\_algstr\_0 X0) \wedge (v2\_rlvect\_1 \\
& X0) \wedge (v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0) \wedge (v2\_clvect\_1 X0) \wedge \\
& ((v3\_clvect\_1 X0) \wedge (v4\_clvect\_1 X0) \wedge (v5\_clvect\_1 X0) \wedge (l1\_clvect\_1 \\
& X0)))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\
& (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_clvect\_1 \\
& X3 X0) \Rightarrow ((\exists X4. (m2\_clvect\_1 X4 X0 X3) \wedge ((X1 \in X4) \wedge (X2 \in X4))) \Leftrightarrow \\
& (r1\_struct\_0 X3 (k5\_algstr\_0 X0 X1 X2))))))
\end{aligned}$$