

# t7\_clvect\_3 (TM- SRR9NPKgAK8398EXM2HVxhSiMXgz5nDMq)

October 27, 2020

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  $v1\_clvect\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_normsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_clvect\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_clvect\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_bhsp\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_clvect\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
 & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 X0) \wedge \\
 & ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge ((v2\_csspace \\
 & X0) \wedge (l1\_csspace X0)))))))))) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge \\
 & ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X1 \\
 & (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow \\
 & (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 \\
 & X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
 & X0)))))) \Rightarrow (((v1\_clvect\_2 X1 X0) \wedge (v1\_clvect\_2 X2 X0)) \Rightarrow (v1\_clvect\_2 \\
 & (k3\_normsp\_1 X0 X1 X2) X0))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 X0) \wedge \\
& ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge ((v2\_csspace \\
& X0) \wedge (l1\_csspace X0)))))))))) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge \\
& ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X1 \\
& (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow \\
& (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 \\
& X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0)))))) \Rightarrow (k3\_normsp\_1 X0 (k1\_bhsp\_4 X0 X1) (k1\_bhsp\_4 X0 X2) = k1\_bhsp\_4 \\
& X0 (k3\_normsp\_1 X0 X1 X2)))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 X0) \wedge \\
& ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge ((v2\_csspace \\
& X0) \wedge (l1\_csspace X0)))))))))) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge \\
& ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X1 \\
& (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow \\
& (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 \\
& X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0)))))) \Rightarrow (((v1\_clvect\_2 X1 X0) \wedge (v1\_clvect\_2 X2 X0)) \Rightarrow (k1\_clvect\_2 \\
& X0 (k3\_normsp\_1 X0 X1 X2) = k5\_algstr\_0 X0 (k1\_clvect\_2 X0 X1) (k1\_clvect\_2 \\
& X0 X2))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(l1\_csspace X0) \Rightarrow (l1\_clvect\_1 X0) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_clvect\_1 X0) \Rightarrow (l2\_algstr\_0 X0) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (l2\_algstr\_0 \\
& X0)) \wedge (((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 \\
& X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0)))))) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 \\
& X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0)))))) \Rightarrow ((v1\_funct\_1 (k3\_normsp\_1 X0 X1 X2)) \wedge ((v1\_funct\_2 \\
& (k3\_normsp\_1 X0 X1 X2) k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 \\
& (k3\_normsp\_1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l2\_algstr\_0 X0)) \wedge \\ & ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ & X0)))))) \Rightarrow ((v1\_funct\_1 (k1\_bhsp\_4 X0 X1)) \wedge ((v1\_funct\_2 (k1\_bhsp\_4 \\ & X0 X1) k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 (k1\_bhsp\_4 X0 \\ & X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 X0) \wedge \\ & ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge ((v2\_csspace \\ & X0) \wedge (l1\_csspace X0)))))))))) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge \\ & ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X1 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow \\ & (k1\_clvect\_3 X0 X1 = k1\_clvect\_2 X0 (k1\_bhsp\_4 X0 X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 X0) \wedge \\ & ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge ((v2\_csspace \\ & X0) \wedge (l1\_csspace X0)))))))))) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge \\ & ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X1 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow \\ & ((v1\_clvect\_3 X1 X0) \Leftrightarrow (v1\_clvect\_2 (k1\_bhsp\_4 X0 X1) X0))) \end{aligned} \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 X0) \wedge \\ & ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge ((v2\_csspace \\ & X0) \wedge (l1\_csspace X0)))))))))) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge \\ & ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X1 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow \\ & (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 \\ & X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ & X0)))))) \Rightarrow (((v1\_clvect\_3 X1 X0) \wedge (v1\_clvect\_3 X2 X0)) \Rightarrow ((v1\_clvect\_3 \\ & (k3\_normsp\_1 X0 X1 X2) X0) \wedge (k1\_clvect\_3 X0 (k3\_normsp\_1 X0 X1 X2) = \\ & k5\_algstr\_0 X0 (k1\_clvect\_3 X0 X1) (k1\_clvect\_3 X0 X2)))))) \end{aligned}$$