

## t27\_csspace4

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. 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  $v3\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $v4\_normsp\_0 : \iota \Rightarrow o$  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  $v8\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_clopan1 : \iota \Rightarrow o$  be given. Let  $l2\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $k9\_csspace4 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $v1\_csspace3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v9\_clvect\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge \\
 & ((v13\_algstr\_0 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 \\
 & X1) \wedge ((v3\_normsp\_0 X1) \wedge ((v4\_normsp\_0 X1) \wedge ((v2\_clvect\_1 X1) \wedge \\
 & ((v3\_clvect\_1 X1) \wedge ((v4\_clvect\_1 X1) \wedge ((v5\_clvect\_1 X1) \wedge ((v8\_clvect\_1 \\
 & X1) \wedge (l2\_clvect\_1 X1)))))))))) \Rightarrow ((v3\_clopan1 X1) \Rightarrow (\forall X2. \\
 & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 (k9\_csspace4 \\
 & X0 X1))) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\
 & (u1\_struct\_0 (k9\_csspace4 X0 X1)))))) \Rightarrow ((v1\_csspace3 X2 (k9\_csspace4 \\
 & X0 X1)) \Rightarrow (v9\_clvect\_1 X2 (k9\_csspace4 X0 X1))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\
& ((v13\_algstr\_0 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 \\
& X1) \wedge ((v3\_normsp\_0 X1) \wedge ((v4\_normsp\_0 X1) \wedge ((v2\_clvect\_1 X1) \wedge \\
& ((v3\_clvect\_1 X1) \wedge ((v4\_clvect\_1 X1) \wedge ((v5\_clvect\_1 X1) \wedge ((v8\_clvect\_1 \\
& X1) \wedge (l2\_clvect\_1 X1)))))))))) \Rightarrow ((\neg v2\_struct\_0 (k9\_csspace4 \\
& X0 X1)) \wedge ((v13\_algstr\_0 (k9\_csspace4 X0 X1)) \wedge ((v2\_rlvect\_1 (k9\_csspace4 \\
& X0 X1)) \wedge ((v3\_rlvect\_1 (k9\_csspace4 X0 X1)) \wedge ((v4\_rlvect\_1 (k9\_csspace4 \\
& X0 X1)) \wedge ((v3\_normsp\_0 (k9\_csspace4 X0 X1)) \wedge ((v4\_normsp\_0 (k9\_csspace4 \\
& X0 X1)) \wedge ((v2\_clvect\_1 (k9\_csspace4 X0 X1)) \wedge ((v3\_clvect\_1 (k9\_csspace4 \\
& X0 X1)) \wedge ((v4\_clvect\_1 (k9\_csspace4 X0 X1)) \wedge ((v5\_clvect\_1 (k9\_csspace4 \\
& X0 X1)) \wedge ((v8\_clvect\_1 (k9\_csspace4 X0 X1)) \wedge (l2\_clvect\_1 (k9\_csspace4 \\
& X0 X1))))))))))))) \tag{2}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 X0) \wedge \\
& ((v4\_normsp\_0 X0) \wedge ((v2\_clvect\_1 X0) \wedge ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 \\
& X0) \wedge ((v5\_clvect\_1 X0) \wedge ((v8\_clvect\_1 X0) \wedge (l2\_clvect\_1 X0)))))))))) \Rightarrow \\
& ((v3\_clpban1 X0) \Leftrightarrow (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 \\
& X1 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow ((v1\_csspace3 \\
& X1 X0) \Rightarrow (v9\_clvect\_1 X1 X0))) \tag{3}
\end{aligned}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\
& ((v13\_algstr\_0 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 \\
& X1) \wedge ((v3\_normsp\_0 X1) \wedge ((v4\_normsp\_0 X1) \wedge ((v2\_clvect\_1 X1) \wedge \\
& ((v3\_clvect\_1 X1) \wedge ((v4\_clvect\_1 X1) \wedge ((v5\_clvect\_1 X1) \wedge ((v8\_clvect\_1 \\
& X1) \wedge ((v3\_clpban1 X1) \wedge (l2\_clvect\_1 X1)))))))))) \Rightarrow ((\neg v2\_struct\_0 \\
& (k9\_csspace4 X0 X1)) \wedge ((v13\_algstr\_0 (k9\_csspace4 X0 X1)) \wedge ((v2\_rlvect\_1 \\
& (k9\_csspace4 X0 X1)) \wedge ((v3\_rlvect\_1 (k9\_csspace4 X0 X1)) \wedge ((v4\_rlvect\_1 \\
& (k9\_csspace4 X0 X1)) \wedge ((v3\_normsp\_0 (k9\_csspace4 X0 X1)) \wedge ((v4\_normsp\_0 \\
& (k9\_csspace4 X0 X1)) \wedge ((v2\_clvect\_1 (k9\_csspace4 X0 X1)) \wedge ((v3\_clvect\_1 \\
& (k9\_csspace4 X0 X1)) \wedge ((v4\_clvect\_1 (k9\_csspace4 X0 X1)) \wedge ((v5\_clvect\_1 \\
& (k9\_csspace4 X0 X1)) \wedge ((v8\_clvect\_1 (k9\_csspace4 X0 X1)) \wedge ((v3\_clpban1 \\
& (k9\_csspace4 X0 X1)) \wedge (l2\_clvect\_1 (k9\_csspace4 X0 X1)))))))))))))
\end{aligned}$$