

t45\_csspace  
(TMHDZd61QfukiFfQ8xjh4oYtLbC9hDbeTnP)

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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k17\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k12\_csspace : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_csspace : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_square\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 X0) \wedge \\ & ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge ((v2\_csspace \\ & X0) \wedge (l1\_csspace X0)))))))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 ( \\ & u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow \\ & (r1\_xxreal\_0 (k17\_complex1 (k12\_csspace X0 X1 X2)) (k8\_real\_1 \\ & (k7\_square\_1 (k17\_complex1 (k12\_csspace X0 X1 X1))) (k7\_square\_1 \\ & (k17\_complex1 (k12\_csspace X0 X2 X2))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v2\_clvect\_1 X0) \wedge \\ & ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v5\_clvect\_1 X0) \wedge ((v2\_csspace \\ & X0) \wedge (l1\_csspace X0)))))))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 ( \\ & u1\_struct\_0 X0)) \Rightarrow (k13\_csspace X0 X1 = k7\_square\_1 (k17\_complex1 \\ & (k12\_csspace X0 X1 X1)))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (v13\_algstr\_0 X0) \wedge (v2\_rlvect\_1 \\ & X0) \wedge (v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0) \wedge (v2\_clvect\_1 X0) \wedge \\ & ((v3\_clvect\_1 X0) \wedge (v4\_clvect\_1 X0) \wedge (v5\_clvect\_1 X0) \wedge (v2\_csspace \\ & X0) \wedge (l1\_csspace X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 ( \\ & u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow \\ & (r1\_xxreal\_0 (k17\_complex1 (k12\_csspace X0 X1 X2)) (k8\_real\_1 \\ & (k13\_csspace X0 X1) (k13\_csspace X0 X2)))))) \end{aligned}$$