

t19_csspace

(TMPGyqjhz1rqqPM2jhTQ68WeT4zuFv7SfHN)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ 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 $v2_clvect_1 : \iota \Rightarrow o$ 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 $k12_csspace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_clvect_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_complex1 : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_complex1 : \iota \Rightarrow \iota$ be given. Let $k4_complex1 : \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
 & ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\
 & X1) \wedge ((v2_clvect_1 X1) \wedge ((v3_clvect_1 X1) \wedge ((v4_clvect_1 X1) \wedge \\
 & ((v5_clvect_1 X1) \wedge ((v2_csspace X1) \wedge (l1_csspace X1)))))))))) \Rightarrow \\
 & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 \\
 & X3 (u1_struct_0 X1)) \Rightarrow (k12_csspace X1 X2 (k1_clvect_1 X1 X3 X0) = \\
 & k3_xcmplx_0 (k15_complex1 X0) (k12_csspace X1 X2 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k15_complex1 (k15_complex1 X0) = X0) \tag{2}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (m1_subset_1 (k15_complex1 X0) k2_numbers) \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_csspace X0)) \Rightarrow ((v2_csspace \\
& X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X4.(v1_xcmplx_0 X4) \Rightarrow (((k12_csspace \\
& X0 X1 X1 = k6_numbers) \Rightarrow (X1 = k4_struct_0 X0)) \wedge (((X1 = k4_struct_0 \\
& X0) \Rightarrow (k12_csspace X0 X1 X1 = k6_numbers)) \wedge ((r1_xxreal_0 k6_numbers \\
& (k3_complex1 (k12_csspace X0 X1 X1))) \wedge ((k6_numbers = k4_complex1 \\
& (k12_csspace X0 X1 X1)) \wedge ((k12_csspace X0 X1 X2 = k15_complex1 (k12_csspace \\
& X0 X2 X1)) \wedge ((k12_csspace X0 (k1_algstr_0 X0 X1 X2) X3 = k2_xcmplx_0 \\
& (k12_csspace X0 X1 X3) (k12_csspace X0 X2 X3)) \wedge (k12_csspace X0 (\\
& k1_clvect_1 X0 X1 X4) X2 = k3_xcmplx_0 X4 (k12_csspace X0 X1 X2))))))))))))) \\
& \hspace{15em} (4)
\end{aligned}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (5)$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\
& X1) \wedge ((v2_clvect_1 X1) \wedge ((v3_clvect_1 X1) \wedge ((v4_clvect_1 X1) \wedge \\
& ((v5_clvect_1 X1) \wedge ((v2_csspace X1) \wedge (l1_csspace X1)))))))))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X1)) \Rightarrow (k12_csspace X1 (k1_clvect_1 X1 X2 X0) X3 = \\
& k12_csspace X1 X2 (k1_clvect_1 X1 X3 (k15_complex1 X0))))))
\end{aligned}$$