

t23_csspace
(TMHqEcjvoCYzNfaSnCgxHXX68ixT6Vdx3LJ)

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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 $v2_csspace : \iota \Rightarrow o$ 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 $k12_csspace : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $l1_clvect_1 : \iota \Rightarrow o$ be given. Let $k1_clvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_complex1 : \iota \Rightarrow \iota$ be given. Let $k6_complex1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ 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 $k15_complex1 : \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ & ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge (l1_clvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (k4_algstr_0 X0 X1 = k1_clvect_1 X0 X1 (k10_complex1 k6_complex1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 (k4_xcmplx_0 np_1) = k4_xcmplx_0 X0) \quad (2)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k2_numbers) \Rightarrow (k10_complex1 X0 = k4_xcmplx_0 X0) \quad (3)$$

Assume the following.

$$\forall X0. (l1_csspace X0) \Rightarrow (l1_clvect_1 X0) \quad (4)$$

Assume the following.

$$m1_subset_1 \ k6_complex1 \ k2_numbers \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (v1_xcmplx_0 \ (k4_xcmplx_0 \ X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 \ X0) \wedge (l1_csspace \\ & X0)) \wedge ((m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \wedge (m1_subset_1 \ X2 \ (u1_struct_0 \\ & X0)))) \Rightarrow (v1_xcmplx_0 \ (k12_csspace \ X0 \ X1 \ X2)) \end{aligned} \quad (7)$$

Assume the following.

$$k6_complex1 = np_1 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 \ X0) \wedge (l1_csspace \ X0)) \Rightarrow ((v2_csspace \\ & X0) \Leftrightarrow (\forall X1.(m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 \ X2 \ (u1_struct_0 \ X0)) \Rightarrow (\forall X3.(m1_subset_1 \ X3 \\ & (u1_struct_0 \ X0)) \Rightarrow (\forall X4.(v1_xcmplx_0 \ X4) \Rightarrow (((k12_csspace \\ & X0 \ X1 \ X1 = k6_numbers) \Rightarrow (X1 = k4_struct_0 \ X0)) \wedge (((X1 = k4_struct_0 \\ & X0) \Rightarrow (k12_csspace \ X0 \ X1 \ X1 = k6_numbers)) \wedge ((r1_xreal_0 \ k6_numbers \\ & (k3_complex1 \ (k12_csspace \ X0 \ X1 \ X1))) \wedge ((k6_numbers = k4_complex1 \\ & (k12_csspace \ X0 \ X1 \ X1)) \wedge ((k12_csspace \ X0 \ X1 \ X2 = k15_complex1 \ (k12_csspace \\ & X0 \ X2 \ X1)) \wedge ((k12_csspace \ X0 \ (k1_algstr_0 \ X0 \ X1 \ X2) \ X3 = k2_xcmplx_0 \\ & (k12_csspace \ X0 \ X1 \ X3) \ (k12_csspace \ X0 \ X2 \ X3)) \wedge (k12_csspace \ X0 \ (\\ & k1_clvect_1 \ X0 \ X1 \ X4) \ X2 = k3_xcmplx_0 \ X4 \ (k12_csspace \ X0 \ X1 \ X2)))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 \ X0) \wedge (v1_xcmplx_0 \ X1)) \Rightarrow (k3_xcmplx_0 \ X0 \ X1 = k3_xcmplx_0 \ X1 \ X0) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k2_numbers) \Rightarrow (v1_xcmplx_0 \ X0) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 \ X0) \wedge ((v13_algstr_0 \ X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 \ X0) \wedge ((v4_rlvect_1 \ X0) \wedge ((v2_clvect_1 \ X0) \wedge \\ & ((v3_clvect_1 \ X0) \wedge ((v4_clvect_1 \ X0) \wedge ((v5_clvect_1 \ X0) \wedge ((v2_csspace \\ & X0) \wedge (l1_csspace \ X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ (\\ & u1_struct_0 \ X0)) \Rightarrow (\forall X2.(m1_subset_1 \ X2 \ (u1_struct_0 \ X0)) \Rightarrow \\ & (k12_csspace \ X0 \ (k4_algstr_0 \ X0 \ X1) \ X2 = k4_xcmplx_0 \ (k12_csspace \\ & X0 \ X1 \ X2)))) \end{aligned}$$