

t44_csspace (TMJUK-
TrzvZEE51yibrsgMmjp4dPEHcMW3hH)

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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 $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k13_csspace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k12_csspace : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_complex1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k7_square_1 : \iota \Rightarrow \iota$ be given. Let $k6_square_1 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ 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. Let $k1_clvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ &((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\ &X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (\\ &u1_struct_0 X0)) \Rightarrow (k17_complex1 (k12_csspace X0 X1 X1) = k3_complex1 \\ &(k12_csspace X0 X1 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (k7_square_1 X0 = k6_square_1 X0) \tag{2}$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (k17_complex1 X0 = k16_complex1 X0) \tag{3}$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (v1_xreal_0 (k6_square_1 X0)) \tag{4}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (m1_subset_1 (k3_complex1 X0) k1_numbers) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_xreal_0 (k16_complex1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_csspace X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (v1_xcmplx_0 (k12_csspace X0 X1 X2)) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((X1 = k6_square_1 X0) \Leftrightarrow ((r1_xxreal_0 k6_numbers X1) \wedge (k3_square_1 X1 = X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.(((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace X0) \wedge (l1_csspace X0)))))))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k13_csspace X0 X1 = k7_square_1 (k17_complex1 (k12_csspace X0 X1 X1)))))) \quad (9)$$

Assume the following.

$$\forall X0.(((\neg v2_struct_0 X0) \wedge (l1_csspace X0)) \Rightarrow ((v2_csspace X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(v1_xcmplx_0 X4) \Rightarrow (((k12_csspace X0 X1 X1 = k6_numbers) \Rightarrow (X1 = k4_struct_0 X0)) \wedge (((X1 = k4_struct_0 X0) \Rightarrow (k12_csspace X0 X1 X1 = k6_numbers)) \wedge ((r1_xxreal_0 k6_numbers (k3_complex1 (k12_csspace X0 X1 X1))) \wedge ((k6_numbers = k4_complex1 (k12_csspace X0 X1 X1)) \wedge ((k12_csspace X0 X1 X2 = k15_complex1 (k12_csspace X0 X2 X1)) \wedge ((k12_csspace X0 (k1_algstr_0 X0 X1 X2) X3 = k2_xcmplx_0 (k12_csspace X0 X1 X3) (k12_csspace X0 X2 X3)) \wedge (k12_csspace X0 (k1_clvect_1 X0 X1 X4) X2 = k3_xcmplx_0 X4 (k12_csspace X0 X1 X2)))))))))))))) \quad (10)$$

Theorem 1

$$\forall X0.(((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace X0) \wedge (l1_csspace X0)))))))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (r1_xxreal_0 k6_numbers (k13_csspace X0 X1)))$$