

l14.csspace2

(TMZ8XPhV6R1Wv9r9qoYRo6Wx5L2vx2nM863)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k18_csspace : \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k31_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_numbers : \iota$ be given. Let $k2_csspace : \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $l1_clvect_1 : \iota \Rightarrow o$ 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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k25_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $k30_valued_1 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $l1_csspace : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & (r2_relset_1 k5_numbers k2_numbers (k31_valued_1 k5_numbers \\ & k2_numbers X0) (k25_valued_1 k5_numbers k2_numbers X0 (k10_complex1 \\ & k6_complex1))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 \ X2 \\ & (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \wedge (m1_subset_1 \ X3 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ X0 \ X1)))) \Rightarrow ((r2_relset_1 \ X0 \ X1 \ X2 \ X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 \ X2) \wedge \\ & ((v1_funct_2 \ X2 \ X0 \ X1) \wedge (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & X0 \ X1)))) \wedge ((v1_funct_1 \ X3) \wedge ((v1_funct_2 \ X3 \ X0 \ X1) \wedge (m1_subset_1 \\ & X3 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1)))))) \Rightarrow ((r2_funct_2 \ X0 \ X1 \ X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_membered \ X1) \wedge ((v1_funct_1 \\ & X2) \wedge (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1)))) \Rightarrow (k31_valued_1 \\ & X0 \ X1 \ X2 = k30_valued_1 \ X2)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_membered \ X1) \wedge \\ & (((v1_funct_1 \ X2) \wedge (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & X0 \ X1)))) \wedge (v1_xcmplx_0 \ X3))) \Rightarrow (k25_valued_1 \ X0 \ X1 \ X2 \ X3 = k24_valued_1 \\ & X2 \ X3) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k2_numbers) \Rightarrow (k10_complex1 \ X0 = k4_xcmplx_0 \ X0) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xcmplx_0 \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ (u1_struct_0 \\ & k18_csspace)) \Rightarrow (k1_clvect_1 \ k18_csspace \ X1 \ X0 = k25_valued_1 \ k5_numbers \\ & k2_numbers \ (k2_csspace \ X1) \ X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ (u1_struct_0 \ k18_csspace)) \Rightarrow (X0 = k2_csspace \ X0) \quad (10)$$

Assume the following.

$$\begin{aligned} & (\neg v2_struct_0 \ k18_csspace) \wedge ((v13_algstr_0 \ k18_csspace) \wedge ((\\ & v2_rlvect_1 \ k18_csspace) \wedge ((v3_rlvect_1 \ k18_csspace) \wedge ((v4_rlvect_1 \\ & k18_csspace) \wedge ((v2_clvect_1 \ k18_csspace) \wedge ((v3_clvect_1 \ k18_csspace) \wedge \\ & ((v4_clvect_1 \ k18_csspace) \wedge (v5_clvect_1 \ k18_csspace))))))))) \end{aligned} \quad (11)$$

Assume the following.

$$v1_membered \ k2_numbers \quad (12)$$

Assume the following.

$$\forall X0. (l1_csspace \ X0) \Rightarrow (l1_clvect_1 \ X0) \quad (13)$$

Assume the following.

$$m1_subset_1 \ k6_complex1 \ k2_numbers \quad (14)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 \ X0) \Rightarrow (v1_xcmplx_0 \ (k4_xcmplx_0 \ X0)) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_funct_1 \ (k2_csspace \ X0)) \wedge ((v1_funct_2 \ (k2_csspace \\ & X0) \ k5_numbers \ k2_numbers) \wedge (m1_subset_1 \ (k2_csspace \ X0) \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ k5_numbers \ k2_numbers)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 \ X0) \wedge (l1_clvect_1 \\ & X0)) \wedge ((m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \wedge (v1_xcmplx_0 \ X2))) \Rightarrow \\ & (m1_subset_1 \ (k1_clvect_1 \ X0 \ X1 \ X2) \ (u1_struct_0 \ X0)) \end{aligned} \quad (17)$$

Assume the following.

$$(\neg v2_struct_0 \ k18_csspace) \wedge (l1_csspace \ k18_csspace) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_valued_0 \ X0))) \Rightarrow \\ & (k30_valued_1 \ X0 = k24_valued_1 \ X0 \ (k4_xcmplx_0 \ np_1)) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k2_numbers) \Rightarrow (v1_xcmplx_0 \ X0) \quad (20)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xcmplx_0 \ X0) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.(v1_membered X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_valued_0 X2)) \quad (23)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k18_csspace))\Rightarrow((k4_algstr_0 k18_csspace X0 = k31_valued_1 k5_numbers k2_numbers (k2_csspace X0))\wedge(r2_funct_2 k5_numbers k2_numbers (k2_csspace (k4_algstr_0 k18_csspace X0)) (k31_valued_1 k5_numbers k2_numbers (k2_csspace X0))))$$