

t10_csspace (TM- RVuhjGcT1U9tbmMrYyREGHuTm7GQvPVLs)

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Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $g1_clvect.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_csspace : \iota$ be given. Let $k6_csspace : \iota$ be given. Let $k4_csspace : \iota$ be given. Let $k5_csspace : \iota$ be given. Let $k1_clvect.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_complex1 : \iota$ be given. Let $v1_xcmplx.0 : \iota \Rightarrow o$ be given. Let $k25_valued.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_numbers : \iota$ be given. Let $k2_csspace : \iota \Rightarrow \iota$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ 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 $v1_membered : \iota \Rightarrow o$ be given. Let $v1_clvect.1 : \iota \Rightarrow o$ be given. Let $l1_clvect.1 : \iota \Rightarrow o$ be given. Let $u2_struct.0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr.0 : \iota \Rightarrow \iota$ be given. Let $u1_clvect.1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx.0 X0) \Rightarrow (\forall X1.(m1_subset.1 X1 (u1_struct.0 \\ & \quad (g1_clvect.1 k1_csspace k6_csspace k4_csspace k5_csspace))) \Rightarrow \\ & \quad (k1_clvect.1 (g1_clvect.1 k1_csspace k6_csspace k4_csspace k5_csspace) \\ & \quad X1 X0 = k25_valued.1 k5_numbers k2_numbers (k2_csspace X1) X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset.1 X0 X1) \Rightarrow ((v1_xboole.0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct.1 X0) \wedge ((v1_funct.2 X0 k5_numbers k2_numbers) \wedge \\ & \quad (m1_subset.1 X0 (k1_zfmisc.1 (k2_zfmisc.1 k5_numbers k2_numbers)))) \Rightarrow \\ & \quad (r2_relset.1 k5_numbers k2_numbers (k25_valued.1 k5_numbers \\ & \quad k2_numbers X0 k6_complex1) X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset.1 X2 \\ & \quad (k1_zfmisc.1 (k2_zfmisc.1 X0 X1))) \wedge (m1_subset.1 X3 (k1_zfmisc.1 \\ & \quad (k2_zfmisc.1 X0 X1)))) \Rightarrow ((r2_relset.1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X1 \\ & X0)\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) \\ & X0))))\wedge((v1_funct_1 X3)\wedge((v1_funct_2 X3 (k2_zfmisc_1 k2_numbers \\ & X0) X0)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & k2_numbers X0) X0))))))\Rightarrow(\forall X4.\forall X5.\forall X6.\forall X7. \\ & (g1_clvect_1 X0 X1 X2 X3 = g1_clvect_1 X4 X5 X6 X7)\Rightarrow((X0 = X4)\wedge((X1 = \\ & X5)\wedge((X2 = X6)\wedge(X3 = X7)))))) \end{aligned} \quad (5)$$

Assume the following.

$$v1_membered k2_numbers \quad (6)$$

Assume the following.

$$m1_subset_1 k6_csspace k1_csspace \quad (7)$$

Assume the following.

$$m1_subset_1 k6_complex1 k2_numbers \quad (8)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k5_csspace)\wedge((v1_funct_2 k5_csspace (k2_zfmisc_1 \\ & k2_numbers k1_csspace) k1_csspace)\wedge(m1_subset_1 k5_csspace \\ & (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k2_numbers k1_csspace) \\ & k1_csspace)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k4_csspace)\wedge((v1_funct_2 k4_csspace (k2_zfmisc_1 \\ & k1_csspace k1_csspace) k1_csspace)\wedge(m1_subset_1 k4_csspace \\ & (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k1_csspace k1_csspace) \\ & k1_csspace)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_funct_1 (k2_csspace X0)\wedge((v1_funct_2 (k2_csspace \\ & X0) k5_numbers k2_numbers)\wedge(m1_subset_1 (k2_csspace X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers k2_numbers)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_membered X1)\wedge \\ & (((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\wedge(v1_xcmplx_0 X3)))\Rightarrow((v1_funct_1 (k25_valued_1 X0 X1 \\ & X2 X3)\wedge(m1_subset_1 (k25_valued_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k2_numbers)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_csspace \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 \ X1 \\ & X0)\wedge(((v1_funct_1 \ X2)\wedge((v1_funct_2 \ X2 \ (k2_zfmisc_1 \ X0 \ X0) \ X0)\wedge \\ & (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X0) \\ & X0))))\wedge((v1_funct_1 \ X3)\wedge((v1_funct_2 \ X3 \ (k2_zfmisc_1 \ k2_numbers \\ & X0) \ X0)\wedge(m1_subset_1 \ X3 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \\ & k2_numbers \ X0) \ X0))))))\Rightarrow((v1_clvect_1 \ (g1_clvect_1 \ X0 \ X1 \ X2 \ X3))\wedge \\ & (l1_clvect_1 \ (g1_clvect_1 \ X0 \ X1 \ X2 \ X3))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(X0 \in k1_csspace)\Rightarrow(k2_csspace \ X0 = X0) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k2_numbers)\Rightarrow(v1_xcmplx_0 \ X0) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_clvect_1 \ X0)\Rightarrow((v1_clvect_1 \ X0)\Rightarrow(X0 = g1_clvect_1 \\ & (u1_struct_0 \ X0) \ (u2_struct_0 \ X0) \ (u1_algstr_0 \ X0) \ (u1_clvect_1 \\ & X0))) \end{aligned} \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 \ X0 \ (u1_struct_0 \ (g1_clvect_1 \ k1_csspace \\ & k6_csspace \ k4_csspace \ k5_csspace)))\Rightarrow(k1_clvect_1 \ (g1_clvect_1 \\ & k1_csspace \ k6_csspace \ k4_csspace \ k5_csspace) \ X0 \ k6_complex1 = \\ & X0) \end{aligned}$$