

t21_ncfcont1

(TMR9x59YPkHTWsgU1Bf9cEo45vZdpvxm7r9)

October 27, 2020

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 $v3_normsp_0 : \iota \Rightarrow o$ be given. Let $v4_normsp_0 : \iota \Rightarrow o$ 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 $v8_clvect_1 : \iota \Rightarrow o$ be given. Let $l2_clvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $v2_normsp_1 : \iota \Rightarrow o$ be given. Let $l1_normsp_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_ncfcont1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $r2_ncfcont1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_nfcont_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow (k9_relat_1 X1 X0 = k1_tarski (k1_funct_1 X1 X0))) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v3_normsp_0 X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_nfcont_1 X2 X0 X1) \Rightarrow (X1 \in X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski (k1_tarski X0) X1)\Leftrightarrow(X0 \in X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 \\ & X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v3_normsp_0 X0)\wedge \\ & ((v4_normsp_0 X0)\wedge((v2_clvect_1 X0)\wedge((v3_clvect_1 X0)\wedge((v4_clvect_1 \\ & X0)\wedge((v5_clvect_1 X0)\wedge((v8_clvect_1 X0)\wedge(l2_clvect_1 X0))))))))))\Rightarrow \\ & (\forall X1.(((\neg v2_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge((v2_rlvect_1 \\ & X1)\wedge((v3_rlvect_1 X1)\wedge((v4_rlvect_1 X1)\wedge((v5_rlvect_1 X1)\wedge \\ & ((v6_rlvect_1 X1)\wedge((v7_rlvect_1 X1)\wedge((v8_rlvect_1 X1)\wedge((v3_normsp_0 \\ & X1)\wedge((v4_normsp_0 X1)\wedge((v2_normsp_1 X1)\wedge(l1_normsp_1 X1))))))))))\Rightarrow \\ & (\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X1))))\Rightarrow(\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0))\Rightarrow((r2_ncfcont1 X0 X1 X2 X3)\Leftrightarrow((X3 \in k1_relset_1 \\ & (u1_struct_0 X0) X2)\wedge(\forall X4.(m1_nfcont_1 X4 X1 (k7_partfun1 \\ & (u1_struct_0 X1) X2 X3))\Rightarrow(\exists X5.(m1_ncfcont1 X5 X0 X3)\wedge(r1_tarski \\ & (k7_relset_1 (u1_struct_0 X0) (u1_struct_0 X1) X2 X5) X4)))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1)\Rightarrow(k7_relat_1 X1 X0 = k7_relat_1 X1 (k3_xboole_0 (k9_xtuple_0 X1) X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0))\Rightarrow(k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(k7_relset_1 X0 X1 X2 X3 = k7_relat_1 X2 X3) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge \\ & ((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v3_normsp_0 \\ & X0)\wedge((v4_normsp_0 X0)\wedge((v2_clvect_1 X0)\wedge((v3_clvect_1 X0)\wedge \\ & ((v4_clvect_1 X0)\wedge((v5_clvect_1 X0)\wedge((v8_clvect_1 X0)\wedge(l2_clvect_1 \\ & X0))))))))))\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(\forall X2. \\ & (m1_ncfcont1 X2 X0 X1)\Rightarrow(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge(v1_funct_1 X1)))\Rightarrow(m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge(v1_funct_1 X1)))\Rightarrow(\forall X2.(X2 \in k9_xtuple_0 X1)\Rightarrow(k7_partfun1 X0 X1 X2 = k1_funct_1 X1 X2)) \quad (11)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(\forall X1.k9_relat_1 X0 X1 = k7_relat_1 X0 (k1_tarski X1)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v3_normsp_0 X0)\wedge((v4_normsp_0 X0)\wedge((v2_clvect_1 X0)\wedge((v3_clvect_1 X0)\wedge((v4_clvect_1 X0)\wedge((v5_clvect_1 X0)\wedge((v8_clvect_1 X0)\wedge(l2_clvect_1 X0))))))))))))))\Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge((v2_rlvect_1 X1)\wedge((v3_rlvect_1 X1)\wedge((v4_rlvect_1 X1)\wedge((v5_rlvect_1 X1)\wedge((v6_rlvect_1 X1)\wedge((v7_rlvect_1 X1)\wedge((v8_rlvect_1 X1)\wedge((v3_normsp_0 X1)\wedge((v4_normsp_0 X1)\wedge((v2_normsp_1 X1)\wedge(l1_normsp_1 X1))))))))))))))\Rightarrow \\ & (\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow((X3 \in k1_relset_1 (u1_struct_0 X0) X2)\Rightarrow(\\ & (\forall X4.(m1_ncfcont1 X4 X0 X3)\Rightarrow(k9_subset_1 (u1_struct_0 X0) (k1_relset_1 (u1_struct_0 X0) X2) X4\neq k1_tarski X3))\vee(r2_ncfcont1 X0 X1 X2 X3)))))) \end{aligned}$$