

t2_ncfcont2

(TMMF_{x6iu5HwWsvUNGCMLvuEkJQia4R1jVeR})

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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 $v5_rlvect_1 : \iota \Rightarrow o$ 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 $v3_normsp_0 : \iota \Rightarrow o$ be given. Let $v4_normsp_0 : \iota \Rightarrow o$ be given. Let $v2_normsp_1 : \iota \Rightarrow o$ be given. Let $l1_normsp_1 : \iota \Rightarrow o$ 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 $v8_clvect_1 : \iota \Rightarrow o$ be given. Let $l2_clvect_1 : \iota \Rightarrow o$ 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 $r2_ncfcont2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_normsp_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg (X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski\ X0\ X1)\wedge(r1_tarski\ X1\ X2))\Rightarrow(r1_tarski\ X0\ X2) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0\ X1)\wedge((v13_algstr_0\ X1)\wedge \\ & ((v2_rlvect_1\ X1)\wedge((v3_rlvect_1\ X1)\wedge((v4_rlvect_1\ X1)\wedge((v5_rlvect_1 \\ & X1)\wedge((v6_rlvect_1\ X1)\wedge((v7_rlvect_1\ X1)\wedge((v8_rlvect_1\ X1)\wedge \\ & ((v3_normsp_0\ X1)\wedge((v4_normsp_0\ X1)\wedge((v2_normsp_1\ X1)\wedge(l1_normsp_1 \\ & X1))))))))))\Rightarrow(\forall X2.((\neg v2_struct_0\ X2)\wedge((v13_algstr_0 \\ & X2)\wedge((v2_rlvect_1\ X2)\wedge((v3_rlvect_1\ X2)\wedge((v4_rlvect_1\ X2)\wedge \\ & ((v3_normsp_0\ X2)\wedge((v4_normsp_0\ X2)\wedge((v2_clvect_1\ X2)\wedge((v3_clvect_1 \\ & X2)\wedge((v4_clvect_1\ X2)\wedge((v5_clvect_1\ X2)\wedge((v8_clvect_1\ X2)\wedge \\ & (l2_clvect_1\ X2))))))))))\Rightarrow(\forall X3.((v1_funct_1\ X3)\wedge \\ & (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X2)\ (u1_struct_0 \\ & X1))))))\Rightarrow((r2_ncfcont2\ X0\ X1\ X2\ X3)\Leftrightarrow((r1_tarski\ X0\ (k1_relset_1 \\ & (u1_struct_0\ X2)\ X3))\wedge(\forall X4.(m1_subset_1\ X4\ k1_numbers)\Rightarrow \\ & (\neg(\neg r1_xxreal_0\ X4\ k6_numbers)\wedge(\forall X5.(m1_subset_1\ X5\ k1_numbers)\Rightarrow \\ & (\neg(\neg r1_xxreal_0\ X5\ k6_numbers)\wedge(\forall X6.(m1_subset_1\ X6\ (\\ & u1_struct_0\ X2))\Rightarrow(\forall X7.(m1_subset_1\ X7\ (u1_struct_0\ X2))\Rightarrow \\ & (\neg(X6\in X0)\wedge((X7\in X0)\wedge(\neg r1_xxreal_0\ X5\ (k1_normsp_0\ X2\ (k5_algstr_0 \\ & X2\ X6\ X7))))\wedge(r1_xxreal_0\ X4\ (k1_normsp_0\ X1\ (k5_algstr_0\ X1\ (k7_partfun1 \\ & (u1_struct_0\ X1)\ X3\ X6)\ (k7_partfun1\ (u1_struct_0\ X1)\ X3\ X7))))))))))))) \quad (6) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v2_struct_0\ X2)\wedge((v13_algstr_0 \\ & X2)\wedge((v2_rlvect_1\ X2)\wedge((v3_rlvect_1\ X2)\wedge((v4_rlvect_1\ X2)\wedge \\ & ((v5_rlvect_1\ X2)\wedge((v6_rlvect_1\ X2)\wedge((v7_rlvect_1\ X2)\wedge((v8_rlvect_1 \\ & X2)\wedge((v3_normsp_0\ X2)\wedge((v4_normsp_0\ X2)\wedge((v2_normsp_1\ X2)\wedge \\ & (l1_normsp_1\ X2))))))))))\Rightarrow(\forall X3.((\neg v2_struct_0\ X3)\wedge \\ & ((v13_algstr_0\ X3)\wedge((v2_rlvect_1\ X3)\wedge((v3_rlvect_1\ X3)\wedge((v4_rlvect_1 \\ & X3)\wedge((v3_normsp_0\ X3)\wedge((v4_normsp_0\ X3)\wedge((v2_clvect_1\ X3)\wedge \\ & ((v3_clvect_1\ X3)\wedge((v4_clvect_1\ X3)\wedge((v5_clvect_1\ X3)\wedge((v8_clvect_1 \\ & X3)\wedge(l2_clvect_1\ X3))))))))))\Rightarrow(\forall X4.((v1_funct_1 \\ & X4)\wedge(m1_subset_1\ X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X3) \\ & (u1_struct_0\ X2))))))\Rightarrow(((r2_ncfcont2\ X0\ X2\ X3\ X4)\wedge(r1_tarski\ X1 \\ & X0))\Rightarrow(r2_ncfcont2\ X1\ X2\ X3\ X4))) \end{aligned}$$