

t86_ncfcont1 (TMdsTeP- MVs6GS3M1sF3PNnhRAq8JPozyZhc)

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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 $v3_normsp_0 : \iota \Rightarrow o$ 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 $v1_funct_1 : \iota \Rightarrow o$ 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 $k1_numbers : \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_ncfcont1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r11_ncfcont1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_seq_4 : \iota \Rightarrow \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $v1_rcomp_1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_normsp_0 X0) \wedge \\
& ((v4_normsp_0 X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 \\
& X0) \wedge ((v5_clvect_1 X0) \wedge ((v8_clvect_1 X0) \wedge (l2_clvect_1 X0)))))))))) \Rightarrow \\
& (\forall X1. ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) k1_numbers)))) \Rightarrow (((v1_ncfcont1 (k1_relset_1 \\
& (u1_struct_0 X0) X1) X0) \wedge (r11_ncfcont1 X0 X1 (k1_relset_1 (u1_struct_0 \\
& X0) X1))) \Rightarrow (v1_rcomp_1 (k2_relset_1 k1_numbers X1))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow ((k9_xtuple_0 X0 = k1_xboole_0) \Leftrightarrow (k10_xtuple_0 X0 = k1_xboole_0)) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X3)\wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(\neg(X2 \in k10_xtuple_0 \\ & X3)\wedge(\forall X4.(m1_subset_1 X4 X0)\Rightarrow(\neg(X4 \in k1_relset_1 X0 X3)\wedge \\ & (X2 = k1_funct_1 X3 X4)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow((v1_rcomp_1 \\ & X0)\Rightarrow((X0 = k1_xboole_0)\vee((k4_seq_4 X0 \in X0)\wedge(k5_seq_4 X0 \in X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(\\ & k2_relset_1 X0 X1 = k10_xtuple_0 X1) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(\\ & k1_relset_1 X0 X1 = k9_xtuple_0 X1) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(\\ & m1_subset_1 (k2_relset_1 X0 X1) (k1_zfmisc_1 X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge(\\ & v1_funct_1 X1)))\Rightarrow(\forall X2.(X2 \in k9_xtuple_0 X1)\Rightarrow(k7_partfun1 \\ & X0 X1 X2 = k1_funct_1 X1 X2)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v3_normsp_0 X0) \wedge \\ & ((v4_normsp_0 X0) \wedge (v2_clvect_1 X0) \wedge (v3_clvect_1 X0) \wedge (v4_clvect_1 \\ & X0) \wedge (v5_clvect_1 X0) \wedge (v8_clvect_1 X0) \wedge (l2_clvect_1 X0)))))) \Rightarrow \\ & (\forall X1. ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) k1_numbers)))) \Rightarrow (\neg(k1_relset_1 (u1_struct_0 \\ & X0) X1 \neq k1_xboole_0) \wedge (v1_ncfcont1 (k1_relset_1 (u1_struct_0 \\ & X0) X1) X0) \wedge (r11_ncfcont1 X0 X1 (k1_relset_1 (u1_struct_0 X0) \\ & X1))) \wedge (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg(X2 \in k1_relset_1 (u1_struct_0 \\ & X0) X1) \wedge (X3 \in k1_relset_1 (u1_struct_0 X0) X1) \wedge ((k7_partfun1 \\ & k1_numbers X1 X2 = k4_seq_4 (k2_relset_1 k1_numbers X1)) \wedge (k7_partfun1 \\ & k1_numbers X1 X3 = k5_seq_4 (k2_relset_1 k1_numbers X1)))))))))) \end{aligned}$$