

t34_ncfcont2

(TMHL7UnDE2cpDmb17P3A8FH1M6XicHUm59F)

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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 $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_ncfcont1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5_ncfcont2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_seq_4 : \iota \Rightarrow \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $r11_ncfcont1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
 & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_normsp_0 X0) \wedge \\
 & ((v4_normsp_0 X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 \\
 & X0) \wedge ((v5_clvect_1 X0) \wedge ((v8_clvect_1 X0) \wedge (l2_clvect_1 X0)))))))))) \Rightarrow \\
 & (\forall X1. ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & (u1_struct_0 X0) k1_numbers)))) \Rightarrow (\forall X2. (m1_subset_1 X2 \\
 & (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\neg (X2 \neq k1_xboole_0) \wedge ((r1_tarski \\
 & X2 (k1_relset_1 (u1_struct_0 X0) X1)) \wedge ((v1_ncfcont1 X2 X0) \wedge ((\\
 & r11_ncfcont1 X0 X1 X2) \wedge (\forall X3. (m1_subset_1 X3 (u1_struct_0 \\
 & X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\neg (X3 \in X2) \wedge \\
 & ((X4 \in X2) \wedge ((k7_partfun1 k1_numbers X1 X3 = k4_seq_4 (k7_relset_1 \\
 & (u1_struct_0 X0) k1_numbers X1 X2)) \wedge (k7_partfun1 k1_numbers X1 \\
 & X4 = k5_seq_4 (k7_relset_1 (u1_struct_0 X0) k1_numbers X1 X2))))))))))))) \\
 & (1)
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\
& ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v3_normsp_0 \\
& X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_clvect_1 X1) \wedge ((v3_clvect_1 X1) \wedge \\
& ((v4_clvect_1 X1) \wedge ((v5_clvect_1 X1) \wedge ((v8_clvect_1 X1) \wedge (l2_clvect_1 \\
& X1)))))))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) k1_numbers)))) \Rightarrow \\
& ((r5_ncfcont2 X0 X1 X2) \Rightarrow (r11_ncfcont1 X1 X2 X0)))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_normsp_0 X0) \wedge \\
& ((v4_normsp_0 X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 \\
& X0) \wedge ((v5_clvect_1 X0) \wedge ((v8_clvect_1 X0) \wedge (l2_clvect_1 X0)))))))))) \Rightarrow \\
& (\forall X1. ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) k1_numbers)))) \Rightarrow (\forall X2. (m1_subset_1 X2 \\
& (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\neg (X2 \neq k1_xboole_0) \wedge ((r1_tarski \\
& X2 (k1_relset_1 (u1_struct_0 X0) X1)) \wedge ((v1_ncfcont1 X2 X0) \wedge ((\\
& r5_ncfcont2 X2 X0 X1) \wedge (\forall X3. (m1_subset_1 X3 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\neg (X3 \in X2) \wedge \\
& ((X4 \in X2) \wedge ((k7_partfun1 k1_numbers X1 X3 = k4_seq_4 (k7_relset_1 \\
& (u1_struct_0 X0) k1_numbers X1 X2)) \wedge (k7_partfun1 k1_numbers X1 \\
& X4 = k5_seq_4 (k7_relset_1 (u1_struct_0 X0) k1_numbers X1 X2)))))))))))))
\end{aligned}$$