

t23_nfcont_1

(TMKzXk5XbdoZ3RTef2JB7TE8fjqPGWDpfG6)

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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 $v1_funct_1 : \iota \Rightarrow o$ 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 $r3_nfcont_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_normsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_normsp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_nfcont_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the

following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v3_normsp_0 \\
& X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge \\
& ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 \\
& X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow \\
& (\forall X2. \forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow ((r3_nfcont_1 \\
& X1 X0 X3 X2) \Leftrightarrow ((r1_tarski X2 (k1_relset_1 (u1_struct_0 X1) X3)) \wedge \\
& (\forall X4. ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 k5_numbers (u1_struct_0 \\
& X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X1)))))) \Rightarrow (((r1_tarski (k2_relset_1 (u1_struct_0 X1) X4) X2) \wedge \\
& ((v3_normsp_1 X4 X1) \wedge (k6_normsp_1 X1 X4 \in X2))) \Rightarrow ((v3_normsp_1 \\
& (k8_funct_2 k5_numbers (u1_struct_0 X0) (u1_struct_0 X1) X4 X3) \\
& X0) \wedge (k7_partfun1 (u1_struct_0 X0) X3 (k6_normsp_1 X1 X4) = k6_normsp_1 \\
& X0 (k8_funct_2 k5_numbers (u1_struct_0 X0) (u1_struct_0 X1) X4 \\
& X3))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v3_normsp_0 \\
& X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge \\
& ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 \\
& X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3. (r3_nfcont_1 \\
& X0 X1 X2 X3) \Leftrightarrow ((r1_tarski X3 (k1_relset_1 (u1_struct_0 X0) X2)) \wedge \\
& (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((X4 \in X3) \Rightarrow (r1_nfcont_1 \\
& X0 X1 (k2_partfun1 (u1_struct_0 X0) (u1_struct_0 X1) X2 X3) X4))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v2_struct_0 X2) \wedge (v13_algstr_0 \\ & X2) \wedge (v2_rlvect_1 X2) \wedge (v3_rlvect_1 X2) \wedge (v4_rlvect_1 X2) \wedge \\ & ((v5_rlvect_1 X2) \wedge (v6_rlvect_1 X2) \wedge (v7_rlvect_1 X2) \wedge (v8_rlvect_1 \\ & X2) \wedge (v3_normsp_0 X2) \wedge (v4_normsp_0 X2) \wedge (v2_normsp_1 X2) \wedge \\ & (l1_normsp_1 X2)))))) \Rightarrow (\forall X3. ((\neg v2_struct_0 X3) \wedge \\ & (v13_algstr_0 X3) \wedge (v2_rlvect_1 X3) \wedge (v3_rlvect_1 X3) \wedge (v4_rlvect_1 \\ & X3) \wedge (v5_rlvect_1 X3) \wedge (v6_rlvect_1 X3) \wedge (v7_rlvect_1 X3) \wedge \\ & (v8_rlvect_1 X3) \wedge (v3_normsp_0 X3) \wedge (v4_normsp_0 X3) \wedge (v2_normsp_1 \\ & X3) \wedge (l1_normsp_1 X3)))))) \Rightarrow (\forall X4. ((v1_funct_1 \\ & X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X2) \\ & (u1_struct_0 X3)))))) \Rightarrow (((r3_nfcont_1 X2 X3 X4 X0) \wedge (r1_tarski X1 \\ & X0)) \Rightarrow (r3_nfcont_1 X2 X3 X4 X1))) \end{aligned}$$