

t26_nfcont_4

(TMbidCr7bnSx3vC8Wxs24RipcnDPzWaLSqy)

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Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ 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 $k1_euclid : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_nfcont_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_integr15 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_integr15 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_real_ns1 : \iota \Rightarrow \iota$ be given. Let $k6_vfunct_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_nfcont_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. 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 $k2_vfunct_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_normsp_1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_normsp_0 : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k1_real_ns1 : \iota \Rightarrow \iota$ be given. Let $u1_rlvect_1 : \iota \Rightarrow \iota$ be given. Let $k2_real_ns1 : \iota \Rightarrow \iota$ be given. Let $u1_normsp_0 : \iota \Rightarrow \iota$ be given. Let $k3_real_ns1 : \iota \Rightarrow \iota$ be given.

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 (u1_struct_0 (k4_real_ns1 X0)))))) \Rightarrow \\
& (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X1 (u1_struct_0 (k4_real_ns1 X0)))))) \Rightarrow (\forall X4. ((v1_funct_1 \\
& X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X1 (k1_euclid X0)))))) \Rightarrow \\
& (\forall X5. ((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X1 (k1_euclid X0)))))) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k6_vfunct_1 X1 (k4_real_ns1 \\
& X0) X2 X3 = k7_integr15 X0 X1 X4 X5))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\
& (u1_struct_0 (k4_real_ns1 X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 \\
& X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (k1_euclid \\
& X0)))))) \Rightarrow ((X1 = X2) \Rightarrow ((v1_nfcont_3 X1 (k4_real_ns1 X0)) \Leftrightarrow (v1_nfcont_4 \\
& X2 X0))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v3_normsp_0 \\
& X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))))))) \Rightarrow \\
& (\forall X1. \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 k1_numbers (u1_struct_0 X0)))))) \Rightarrow (\forall X3. ((\\
& v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\
& (u1_struct_0 X0)))))) \Rightarrow (((r1_tarski X1 (k9_subset_1 k1_numbers \\
& (k1_relset_1 k1_numbers X2) (k1_relset_1 k1_numbers X3))) \wedge ((\\
& v1_nfcont_3 (k2_partfun1 k1_numbers (u1_struct_0 X0) X2 X1) X0) \wedge \\
& (v1_nfcont_3 (k2_partfun1 k1_numbers (u1_struct_0 X0) X3 X1) X0)) \Rightarrow \\
& ((v1_nfcont_3 (k2_partfun1 k1_numbers (u1_struct_0 X0) (k6_vfunct_1 \\
& k1_numbers X0 X2 X3) X1) X0) \wedge (v1_nfcont_3 (k2_partfun1 k1_numbers \\
& (u1_struct_0 X0) (k2_vfunct_1 k1_numbers X0 X2 X3) X1) X0))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 (u1_struct_0 (k4_real_ns1 X0)))))) \Rightarrow \\
& (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X1 (u1_struct_0 (k4_real_ns1 X0)))))) \Rightarrow (\forall X4. ((v1_funct_1 \\
& X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X1 (k1_euclid X0)))))) \Rightarrow \\
& (\forall X5. ((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X1 (k1_euclid X0)))))) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k2_vfunct_1 X1 (k4_real_ns1 \\
& X0) X2 X3 = k8_integr15 X0 X1 X4 X5))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{5}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 \\
& X0 X1 X2 X3 = k5_relat_1 X2 X3)
\end{aligned} \tag{7}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (v7_ordinal1 X0) \Rightarrow (((\neg v2_struct_0 (k4_real_ns1 X0)) \wedge \\
& ((v13_algstr_0 (k4_real_ns1 X0)) \wedge ((v2_rlvect_1 (k4_real_ns1 \\
& X0)) \wedge ((v3_rlvect_1 (k4_real_ns1 X0)) \wedge ((v4_rlvect_1 (k4_real_ns1 \\
& X0)) \wedge ((v5_rlvect_1 (k4_real_ns1 X0)) \wedge ((v6_rlvect_1 (k4_real_ns1 \\
& X0)) \wedge ((v7_rlvect_1 (k4_real_ns1 X0)) \wedge ((v8_rlvect_1 (k4_real_ns1 \\
& X0)) \wedge ((v3_normsp_0 (k4_real_ns1 X0)) \wedge ((v4_normsp_0 (k4_real_ns1 \\
& X0)) \wedge ((v1_normsp_1 (k4_real_ns1 X0)) \wedge (v2_normsp_1 (k4_real_ns1 \\
& X0))))))))))
\end{aligned} \tag{9}$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \tag{10}$$

Assume the following.

$$\forall X0. (l1_rlvect_1 X0) \Rightarrow (l2_algstr_0 X0) \tag{11}$$

Assume the following.

$$\forall X0.(l1_normsp_1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l2_normsp_0 X0)) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & (((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge \\ & (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge (v5_rlvect_1 X1) \wedge (v6_rlvect_1 \\ & X1) \wedge (v7_rlvect_1 X1) \wedge (v8_rlvect_1 X1) \wedge (v3_normsp_0 X1) \wedge \\ & ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))))))) \wedge \\ & (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 (u1_struct_0 X1)))))) \wedge ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 (u1_struct_0 X1)))))) \Rightarrow ((v1_funct_1 (k6_vfunct_1 \\ & X0 X1 X2 X3)) \wedge (m1_subset_1 (k6_vfunct_1 X0 X1 X2 X3) (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 (u1_struct_0 X1)))))) \end{aligned} \quad (13)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k4_real_ns1 X0)) \wedge \\ & ((v1_normsp_1 (k4_real_ns1 X0)) \wedge (l1_normsp_1 (k4_real_ns1 X0)))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & (((\neg v2_struct_0 X1) \wedge (l2_algstr_0 X1)) \wedge (((v1_funct_1 X2) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 X1)))))) \wedge ((v1_funct_1 \\ & X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 \\ & X1)))))) \Rightarrow ((v1_funct_1 (k2_vfunct_1 X0 X1 X2 X3)) \wedge (m1_subset_1 \\ & (k2_vfunct_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 \\ & X1)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((v1_funct_1 \\ & (k2_partfun1 X0 X1 X2 X3)) \wedge (m1_subset_1 (k2_partfun1 X0 X1 X2 X3) \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\
& ((v1_normsp_1\ X1) \wedge (l1_normsp_1\ X1))) \Rightarrow ((X1 = k4_real_ns1\ X0) \Leftrightarrow \\
& ((u1_struct_0\ X1 = k1_euclid\ X0) \wedge ((k4_struct_0\ X1 = k5_euclid\ X0) \wedge \\
& ((r1_funct_2\ (k2_zfmisc_1\ (u1_struct_0\ X1)\ (u1_struct_0\ X1)) \\
& (u1_struct_0\ X1)\ (k2_zfmisc_1\ (k1_euclid\ X0)\ (k1_euclid\ X0))\ (\\
& k1_euclid\ X0)\ (u1_algstr_0\ X1)\ (k1_real_ns1\ X0)) \wedge ((r1_funct_2 \\
& (k2_zfmisc_1\ k1_numbers\ (u1_struct_0\ X1))\ (u1_struct_0\ X1)\ (k2_zfmisc_1 \\
& k1_numbers\ (k1_euclid\ X0))\ (k1_euclid\ X0)\ (u1_rlvect_1\ X1)\ (k2_real_ns1 \\
& X0)) \wedge (r1_funct_2\ (u1_struct_0\ X1)\ k1_numbers\ (k1_euclid\ X0)\ k1_numbers \\
& (u1_normsp_0\ X1)\ (k3_real_ns1\ X0))))))
\end{aligned} \tag{18}$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \tag{19}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m2_subset_1\ X0\ k1_numbers\ k5_numbers) \Rightarrow (\forall X1. \\
& \forall X2.((v1_funct_1\ X2) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\
& k1_numbers\ (k1_euclid\ X0)))))) \Rightarrow (\forall X3.((v1_funct_1\ X3) \wedge \\
& (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ (k1_euclid \\
& X0)))))) \Rightarrow (((r1_tarski\ X1\ (k9_subset_1\ k1_numbers\ (k1_relset_1 \\
& k1_numbers\ X2)\ (k1_relset_1\ k1_numbers\ X3))) \wedge ((v1_nfcont_4\ (\\
& k2_partfun1\ k1_numbers\ (k1_euclid\ X0)\ X2\ X1)\ X0) \wedge (v1_nfcont_4 \\
& (k2_partfun1\ k1_numbers\ (k1_euclid\ X0)\ X3\ X1)\ X0))) \Rightarrow ((v1_nfcont_4 \\
& (k2_partfun1\ k1_numbers\ (k1_euclid\ X0)\ (k7_integr15\ X0\ k1_numbers \\
& X2\ X3)\ X1)\ X0) \wedge (v1_nfcont_4\ (k2_partfun1\ k1_numbers\ (k1_euclid \\
& X0)\ (k8_integr15\ X0\ k1_numbers\ X2\ X3)\ X1)\ X0))))))
\end{aligned}$$