

t40_nfcont_4

(TMPXqERxipZbudnq8wBee3HwxS4ZBeZ3Zrg)

October 27, 2020

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 $v2_nfcont_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nfcont_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_fcont_1 : \iota \Rightarrow o$ be given. Let $k1_nfcont_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_normsp_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_vfunct_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_nfcont_3 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k4_ordinal1 : \iota$ 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 $l2_normsp_0 : \iota \Rightarrow o$ be given. Let $l1_normsp_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ 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.

$$\begin{aligned}
 & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
 & (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\
 & X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 (u1_struct_0 (k4_real_ns1 X0)))))) \Rightarrow \\
 & (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & X1 (k1_euclid X0)))))) \Rightarrow ((X2 = X3) \Rightarrow (r2_relset_1 X1 k1_numbers (k3_normsp_0 \\
 & X1 (k4_real_ns1 X0) X2) (k1_nfcont_4 X0 X1 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 (u1_struct_0 (k4_real_ns1 X0)))))) \Rightarrow \\
& (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X1 (k1_euclid X0)))))) \Rightarrow ((X2 = X3) \Rightarrow (k5_vfunct_1 X1 (k4_real_ns1 \\
& X0) X2 = k2_nfcont_4 X0 X1 X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\
& (k1_euclid X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (u1_struct_0 (k4_real_ns1 \\
& X0)))))) \Rightarrow ((X1 = X2) \Rightarrow ((v2_nfcont_4 X1 X0) \Leftrightarrow (v2_nfcont_3 X2 (k4_real_ns1 \\
& X0))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\
& ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 \\
& X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge \\
& ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge (l1_normsp_1 \\
& X1)))))))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (u1_struct_0 X1)))))) \Rightarrow \\
& ((v2_nfcont_3 (k2_partfun1 k1_numbers (u1_struct_0 X1) X2 X0) \\
& X1) \Rightarrow ((v2_nfcont_3 (k5_vfunct_1 k1_numbers X1 (k2_partfun1 k1_numbers \\
& (u1_struct_0 X1) X2 X0)) X1) \wedge ((v2_nfcont_3 (k2_partfun1 k1_numbers \\
& (u1_struct_0 X1) (k5_vfunct_1 k1_numbers X1 X2) X0) X1) \wedge (v2_fcont_1 \\
& (k2_partfun1 k1_numbers k1_numbers (k3_normsp_0 k1_numbers X1 \\
& X2) X0))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\
& (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{6}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k2_partfun1 \\ & X0 X1 X2 X3 = k5_relat_1 X2 X3) \end{aligned} \quad (8)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow((\neg v2_struct_0 (k4_real_ns1 X0))\wedge \\ & ((v13_algstr_0 (k4_real_ns1 X0))\wedge((v2_rlvect_1 (k4_real_ns1 \\ & X0))\wedge((v3_rlvect_1 (k4_real_ns1 X0))\wedge((v4_rlvect_1 (k4_real_ns1 \\ & X0))\wedge((v5_rlvect_1 (k4_real_ns1 X0))\wedge((v6_rlvect_1 (k4_real_ns1 \\ & X0))\wedge((v7_rlvect_1 (k4_real_ns1 X0))\wedge((v8_rlvect_1 (k4_real_ns1 \\ & X0))\wedge((v3_normsp_0 (k4_real_ns1 X0))\wedge((v4_normsp_0 (k4_real_ns1 \\ & X0))\wedge((v1_normsp_1 (k4_real_ns1 X0))\wedge(v2_normsp_1 (k4_real_ns1 \\ & X0))))))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (11)$$

Assume the following.

$$\forall X0.(l2_normsp_0 X0)\Rightarrow((l1_normsp_0 X0)\wedge(l2_struct_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(l1_normsp_1 X0)\Rightarrow((l1_rlvect_1 X0)\wedge(l2_normsp_0 X0)) \quad (13)$$

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.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((\neg v2_struct_0 \\ & X1)\wedge(l1_normsp_0 X1))\wedge((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 (u1_struct_0 X1)))))))\Rightarrow((v1_funct_1 (k3_normsp_0 \\ & X0 X1 X2))\wedge(m1_subset_1 (k3_normsp_0 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))) \end{aligned} \quad (16)$$

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.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X0 k5_numbers)\wedge \\ & ((\neg v1_xboole_0 X1)\wedge((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X1 (k1_euclid X0))))))\Rightarrow((v1_funct_1 (k2_nfcont_4 \\ & X0 X1 X2))\wedge(m1_subset_1 (k2_nfcont_4 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X1 (k1_euclid X0)))))) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X0 k5_numbers)\wedge \\ & ((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 \\ & (k1_euclid X0))))))\Rightarrow((v1_funct_1 (k1_nfcont_4 X0 X1 X2))\wedge(m1_subset_1 \\ & (k1_nfcont_4 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X1 k1_numbers)))) \end{aligned} \quad (19)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge \\ & ((v1_normsp_1 X1)\wedge(l1_normsp_1 X1)))\Rightarrow((X1 = k4_real_ns1 X0)\Leftrightarrow \\ & ((u1_struct_0 X1 = k1_euclid X0)\wedge((k4_struct_0 X1 = k5_euclid X0)\wedge \\ & ((r1_funct_2 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X1)) \\ & (u1_struct_0 X1) (k2_zfmisc_1 (k1_euclid X0) (k1_euclid X0)) (\\ & k1_euclid X0) (u1_algstr_0 X1) (k1_real_ns1 X0))\wedge((r1_funct_2 \\ & (k2_zfmisc_1 k1_numbers (u1_struct_0 X1) (u1_struct_0 X1) (k2_zfmisc_1 \\ & k1_numbers (k1_euclid X0) (k1_euclid X0) (u1_rlvect_1 X1) (k2_real_ns1 \\ & X0))\wedge(r1_funct_2 (u1_struct_0 X1) k1_numbers (k1_euclid X0) k1_numbers \\ & (u1_normsp_0 X1) (k3_real_ns1 X0))))))))) \end{aligned} \quad (20)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (21)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers)\Rightarrow(\forall X1. \\ & \forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers (k1_euclid X0))))\Rightarrow((v2_nfcont_4 (k2_partfun1 k1_numbers \\ & (k1_euclid X0) X2 X1) X0)\Rightarrow((v2_nfcont_4 (k2_nfcont_4 X0 k1_numbers \\ & (k2_partfun1 k1_numbers (k1_euclid X0) X2 X1)) X0)\wedge((v2_fcont_1 \\ & (k2_partfun1 k1_numbers k1_numbers (k1_nfcont_4 X0 k1_numbers \\ & X2) X1))\wedge(v2_nfcont_4 (k2_partfun1 k1_numbers (k1_euclid X0) \\ & (k2_nfcont_4 X0 k1_numbers X2) X1) X0)))))) \end{aligned}$$