

t30_nfcont_3

(TMRgUGLV4U7LAzJG9x7KY2Nq5v1tub7nnfJ)

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Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ 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 $v1_funct.1 : \iota \Rightarrow o$ 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 $v2_nfcont.3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_vfunct.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $r2_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_rlvect.1 : \iota \Rightarrow o$ be given. Let $l2_normsp.0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. (\neg v1_xboole.0 X1) \Rightarrow (\forall X2. ((\neg v2_struct.0 \\
 & \quad X2) \wedge ((v13_algstr.0 X2) \wedge ((v2_rlvect.1 X2) \wedge ((v3_rlvect.1 X2) \wedge \\
 & \quad ((v4_rlvect.1 X2) \wedge ((v5_rlvect.1 X2) \wedge ((v6_rlvect.1 X2) \wedge ((v7_rlvect.1 \\
 & \quad X2) \wedge ((v8_rlvect.1 X2) \wedge ((v3_normsp.0 X2) \wedge ((v4_normsp.0 X2) \wedge \\
 & \quad ((v2_normsp.1 X2) \wedge (l1_normsp.1 X2)))))))))) \Rightarrow (\forall X3. \\
 & \quad ((v1_funct.1 X3) \wedge (m1_subset.1 X3 (k1_zfmisc.1 (k2_zfmisc.1 X1 \\
 & \quad (u1_struct.0 X2)))))) \Rightarrow (\forall X4. (m1_subset.1 X4 k1_numbers) \Rightarrow \\
 & \quad (r2_relset.1 X1 (u1_struct.0 X2) (k2_partfun1 X1 (u1_struct.0 \\
 & \quad X2) (k4_vfunct.1 X1 X2 X3 X4) X0) (k4_vfunct.1 X1 X2 (k2_partfun1 \\
 & \quad X1 (u1_struct.0 X2) X3 X0) X4))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset.1 X2 \\
 & \quad (k1_zfmisc.1 (k2_zfmisc.1 X0 X1))) \wedge (m1_subset.1 X3 (k1_zfmisc.1 \\
 & \quad (k2_zfmisc.1 X0 X1)))) \Rightarrow ((r2_relset.1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 \\ & X0) \wedge (v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge \\ & ((v5_rlvect_1 X0) \wedge (v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 \\ & X0) \wedge (v3_normsp_0 X0) \wedge (v4_normsp_0 X0) \wedge (v2_normsp_1 X0) \wedge \\ & (l1_normsp_1 X0)))))) \wedge ((v1_funct_1 X1) \wedge (v2_nfcont_3 \\ & X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (\\ & u1_struct_0 X0)))))) \wedge (m1_subset_1 X2 k1_numbers)) \Rightarrow ((v1_funct_1 \\ & (k4_vfunct_1 k1_numbers X0 X1 X2)) \wedge (v2_nfcont_3 (k4_vfunct_1 \\ & k1_numbers X0 X1 X2) X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (4)$$

Assume the following.

$$\forall X0. (l1_normsp_1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l2_normsp_0 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & (((\neg v2_struct_0 X1) \wedge (l1_rlvect_1 X1)) \wedge ((v1_funct_1 X2) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 X1)))))) \wedge (m1_subset_1 \\ & X3 k1_numbers))) \Rightarrow ((v1_funct_1 (k4_vfunct_1 X0 X1 X2 X3)) \wedge (m1_subset_1 \\ & (k4_vfunct_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 \\ & X1)))))) \end{aligned} \quad (6)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 k1_numbers) \Rightarrow (\forall X2. \\ & ((\neg v2_struct_0 X2) \wedge (v13_algstr_0 X2) \wedge (v2_rlvect_1 X2) \wedge ((\\ & v3_rlvect_1 X2) \wedge (v4_rlvect_1 X2) \wedge (v5_rlvect_1 X2) \wedge (v6_rlvect_1 \\ & X2) \wedge (v7_rlvect_1 X2) \wedge (v8_rlvect_1 X2) \wedge (v3_normsp_0 X2) \wedge \\ & ((v4_normsp_0 X2) \wedge (v2_normsp_1 X2) \wedge (l1_normsp_1 X2)))))) \Rightarrow \\ & (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers (u1_struct_0 X2)))))) \Rightarrow (((v2_nfcont_3 (k2_partfun1 \\ & k1_numbers (u1_struct_0 X2) X3 X0) X2) \wedge (r1_tarski X0 (k1_relset_1 \\ & k1_numbers X3))) \Rightarrow (v2_nfcont_3 (k2_partfun1 k1_numbers (u1_struct_0 \\ & X2) (k4_vfunct_1 k1_numbers X2 X3 X1) X0) X2)))) \end{aligned}$$