

t33_pdiff_6

(TMJCMnT5PomH6TPG4PzQuzWd4rUqpdv9b9a)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $k1_euclid : \iota \Rightarrow \iota$ be given. Let $r1_pdiff_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_real_ns1 : \iota \Rightarrow \iota$ be given. Let $v3_nfcont_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ 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 $r2_ndiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_normsp_1 : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k1_real_ns1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ 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.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
 & ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
 & X0) \wedge ((v3_normsp_0 X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge \\
 & (l1_normsp_1 X0)))))))))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\
 & ((\neg v7_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((\\
 & v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 \\
 & X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge \\
 & ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow \\
 & (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3. (m1_subset_1 \\
 & X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((r2_ndiff_1 X3 X0 X1 X2) \Rightarrow (\\
 & v3_nfcont_1 X3 X0))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow \\
& (\forall X2.((\neg v1_xboole_0 X2)\wedge(m1_subset_1 X2 k5_numbers))\Rightarrow \\
& (\forall X3.((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k1_euclid X1) (k1_euclid X2))))))\Rightarrow(\forall X4.((v1_funct_1 X4)\wedge \\
& (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k4_real_ns1 \\
& X1)) (u1_struct_0 (k4_real_ns1 X2))))))\Rightarrow((X3 = X4)\Rightarrow((r1_pdiff_6 \\
& X0 X2 X1 X3)\Leftrightarrow(r2_ndiff_1 X0 (k4_real_ns1 X1) (k4_real_ns1 X2) X4))))))
\end{aligned} \tag{2}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{3}$$

Assume the following.

$$v6_membered k4_ordinal1 \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0)\Rightarrow((\neg v2_struct_0 (k4_real_ns1 X0))\wedge \\
& ((v13_algstr_0 (k4_real_ns1 X0))\wedge((v2_rlvect_1 (k4_real_ns1 \\
& X0))\wedge((v3_rlvect_1 (k4_real_ns1 X0))\wedge((v4_rlvect_1 (k4_real_ns1 \\
& X0))\wedge((v5_rlvect_1 (k4_real_ns1 X0))\wedge((v6_rlvect_1 (k4_real_ns1 \\
& X0))\wedge((v7_rlvect_1 (k4_real_ns1 X0))\wedge((v8_rlvect_1 (k4_real_ns1 \\
& X0))\wedge((v3_normsp_0 (k4_real_ns1 X0))\wedge((v4_normsp_0 (k4_real_ns1 \\
& X0))\wedge((v1_normsp_1 (k4_real_ns1 X0))\wedge(v2_normsp_1 (k4_real_ns1 \\
& X0))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0)\wedge(v7_ordinal1 X0))\Rightarrow((\neg v2_struct_0 \\
& (k4_real_ns1 X0))\wedge((\neg v7_struct_0 (k4_real_ns1 X0))\wedge(v1_normsp_1 \\
& (k4_real_ns1 X0))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0)\Rightarrow((\neg v2_struct_0 (k4_real_ns1 X0))\wedge \\
& ((v1_normsp_1 (k4_real_ns1 X0))\wedge(l1_normsp_1 (k4_real_ns1 X0))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge \\
& ((v1_normsp_1 X1)\wedge(l1_normsp_1 X1)))\Rightarrow((X1 = k4_real_ns1 X0)\Leftrightarrow \\
& ((u1_struct_0 X1 = k1_euclid X0)\wedge((k4_struct_0 X1 = k5_euclid X0)\wedge \\
& ((r1_funct_2 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X1)) \\
& (u1_struct_0 X1) (k2_zfmisc_1 (k1_euclid X0) (k1_euclid X0)) (\\
& k1_euclid X0) (u1_algstr_0 X1) (k1_real_ns1 X0))\wedge((r1_funct_2 \\
& (k2_zfmisc_1 k1_numbers (u1_struct_0 X1)) (u1_struct_0 X1) (k2_zfmisc_1 \\
& k1_numbers (k1_euclid X0)) (k1_euclid X0) (u1_rlvect_1 X1) (k2_real_ns1 \\
& X0))\wedge(r1_funct_2 (u1_struct_0 X1) k1_numbers (k1_euclid X0) k1_numbers \\
& (u1_normsp_0 X1) (k3_real_ns1 X0))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v7_ordinal1\ X1)) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0\ X0)\wedge(m1_subset_1\ X0\ k5_numbers))\Rightarrow \\ & (\forall X1.((\neg v1_xboole_0\ X1)\wedge(m1_subset_1\ X1\ k5_numbers))\Rightarrow \\ & (\forall X2.((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & (k1_euclid\ X0)\ (k1_euclid\ X1))))))\Rightarrow(\forall X3.(m1_subset_1\ X3 \\ & (k1_zfmisc_1\ (k1_euclid\ X0)))\Rightarrow(\neg(r1_pdif6\ X3\ X1\ X0\ X2)\wedge(\forall X4. \\ & (m1_subset_1\ X4\ (k1_zfmisc_1\ (u1_struct_0\ (k4_real_ns1\ X0))))\Rightarrow \\ & (\neg(X3 = X4)\wedge(v3_nfcont_1\ X4\ (k4_real_ns1\ X0))))))))) \end{aligned}$$