

t17_pdiff_8

(TMFjmBujDFACefzdkjgnMKJhUzErdqzZ8SN)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_real_ns1 : \iota \Rightarrow \iota$ be given. Let $k1_normsp_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_normsp_1 : \iota \Rightarrow o$ be given. Let $l1_normsp_1 : \iota \Rightarrow o$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned}
 & \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\
 & \quad (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k4_real_ns1 X0))) \Rightarrow \\
 & \quad (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (k1_normsp_0 \\
 & \quad (k4_real_ns1 np_1) (k3_funct_2 (u1_struct_0 (k4_real_ns1 X0)) \\
 & \quad (u1_struct_0 (k4_real_ns1 np_1)) (k4_pdiff_1 X2 X0) X1) = k17_complex1 \\
 & \quad (k1_seq_1 (k1_pdiff_1 X2 X0) X1))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
 & \quad (k4_real_ns1 X0))) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers (k1_euclid \\
 & \quad X0)) \Rightarrow ((X1 = X2) \Rightarrow (k1_normsp_0 (k4_real_ns1 X0) X1 = k12_euclid X2))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((\neg v1_xboole_0 \\
& X1) \wedge (m2_subset_1 X1 k1_numbers k5_numbers)) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 (k4_real_ns1 X1))) \Rightarrow ((\forall X3.(m2_subset_1 \\
& X3 k1_numbers k5_numbers) \Rightarrow (((r1_xxreal_0 np_1 X3) \wedge (r1_xxreal_0 \\
& X3 X1)) \Rightarrow (r1_xxreal_0 (k1_normsp_0 (k4_real_ns1 np_1) (k3_funct_2 \\
& (u1_struct_0 (k4_real_ns1 X1)) (u1_struct_0 (k4_real_ns1 np_1)) \\
& (k4_pdiff_1 X3 X1) X2)) X0))) \Rightarrow (r1_xxreal_0 (k1_normsp_0 (k4_real_ns1 \\
& X1) X2) (k11_binop_2 X1 X0))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{5}$$

Assume the following.

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

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{7}$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \tag{8}$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k4_real_ns1 X0)) \wedge \\
& ((v1_normsp_1 (k4_real_ns1 X0)) \wedge (l1_normsp_1 (k4_real_ns1 X0))))
\end{aligned} \tag{10}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (m1_finseq_2 (k1_euclid X0) k1_numbers) \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\
& ((v1_normsp_1\ X1) \wedge (l1_normsp_1\ X1))) \Rightarrow ((X1 = k4_real_ns1\ X0) \Leftrightarrow \\
& ((u1_struct_0\ X1 = k1_euclid\ X0) \wedge ((k4_struct_0\ X1 = k5_euclid\ X0) \wedge \\
& ((r1_funct_2\ (k2_zfmisc_1\ (u1_struct_0\ X1)\ (u1_struct_0\ X1)) \\
& (u1_struct_0\ X1)\ (k2_zfmisc_1\ (k1_euclid\ X0)\ (k1_euclid\ X0))\ (\\
& k1_euclid\ X0)\ (u1_algstr_0\ X1)\ (k1_real_ns1\ X0)) \wedge ((r1_funct_2 \\
& (k2_zfmisc_1\ k1_numbers\ (u1_struct_0\ X1))\ (u1_struct_0\ X1)\ (k2_zfmisc_1 \\
& k1_numbers\ (k1_euclid\ X0))\ (k1_euclid\ X0)\ (u1_rlvect_1\ X1)\ (k2_real_ns1 \\
& X0)) \wedge (r1_funct_2\ (u1_struct_0\ X1)\ k1_numbers\ (k1_euclid\ X0)\ k1_numbers \\
& (u1_normsp_0\ X1)\ (k3_real_ns1\ X0))))))
\end{aligned} \tag{12}$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \tag{13}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (\forall X1.((\neg v1_xboole_0 \\
& X1) \wedge (m2_subset_1\ X1\ k1_numbers\ k5_numbers)) \Rightarrow (\forall X2.(m2_finseq_2 \\
& X2\ k1_numbers\ (k1_euclid\ X1)) \Rightarrow (\forall X3.(m2_subset_1\ X3\ k1_numbers \\
& k5_numbers) \Rightarrow ((r1_xxreal_0\ np_1\ X3) \wedge (r1_xxreal_0\ X3\ X1)) \Rightarrow (\\
& r1_xxreal_0\ (k17_complex1\ (k1_seq_1\ (k1_pdfif_1\ X3\ X1)\ X2))\ X0))) \Rightarrow \\
& (r1_xxreal_0\ (k12_euclid\ X2)\ (k11_binop_2\ X1\ X0))))
\end{aligned}$$