

t5_pdiff_8

(TMYPQQ4iDqW2bR7sb5g8ukVx2pn5WiD6QK8)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. 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 $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_real_ns1 : \iota \Rightarrow \iota$ be given. Let $k1_normsp_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k4_real_ns1 X0))) \Rightarrow \\ (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (((r1_xxreal_0 \\ np_1 X2) \wedge (r1_xxreal_0 X2 X0)) \Rightarrow (r1_xxreal_0 (k1_normsp_0 (k4_real_ns1 \\ np_1) (k3_funct_2 (u1_struct_0 (k4_real_ns1 X0)) (u1_struct_0 \\ (k4_real_ns1 np_1)) (k4_pdif_1 X2 X0) X1)) (k1_normsp_0 (k4_real_ns1 \\ X0) X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k4_real_ns1 X0))) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers (k1_euclid \\ X0)) \Rightarrow ((X1 = X2) \Rightarrow (k1_normsp_0 (k4_real_ns1 X0) X1 = k12_euclid X2)))) \end{aligned} \quad (3)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (7)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (8)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (9)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (11)$$

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

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0\ X0) \wedge (m2_subset_1\ X0\ k1_numbers\ k5_numbers)) \Rightarrow \\
& (\forall X1.(m2_finseq_2\ X1\ k1_numbers\ (k1_euclid\ X0)) \Rightarrow (\forall X2. \\
& (m2_subset_1\ X2\ k1_numbers\ k5_numbers) \Rightarrow (((r1_xxreal_0\ np_1 \\
& X2) \wedge (r1_xxreal_0\ X2\ X0)) \Rightarrow (r1_xxreal_0\ (k17_complex1\ (k1_seq_1 \\
& (k1_pdiff_1\ X2\ X0)\ X1))\ (k12_euclid\ X1))))))
\end{aligned}$$