

t4_pdiff_8 (TM- GAUTc32q4cXk8MUVd8GtxF7p8ht3kBpxQ)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $np_1 : \iota$ 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 $k17_complex1 : \iota \Rightarrow \iota$ 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 $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ 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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ 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 $u1_rlvect_1 : \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 (k4_real_ns1 np_1))) \Rightarrow ((X1 = k12_finseq_1 k1_numbers \\ & X0) \Rightarrow (k1_normsp_0 (k4_real_ns1 np_1) X1 = k18_complex1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k18_complex1 X0 = k16_complex1 X0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k17_complex1 X0 = k16_complex1 X0) \quad (5)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (6)$$

Assume the following.

$$v3_membered k1_numbers \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\neg v1_xboole_0 (k1_euclid X0)) \quad (9)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k4_real_ns1 X0)) \wedge ((v1_normsp_1 (k4_real_ns1 X0)) \wedge (l1_normsp_1 (k4_real_ns1 X0)))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow ((v1_funct_1 (k4_pdiff_1 X0 X1)) \wedge ((v1_funct_2 (k4_pdiff_1 X0 X1) (u1_struct_0 (k4_real_ns1 X1)) (u1_struct_0 (k4_real_ns1 np_1)))) \wedge (m1_subset_1 (k4_pdiff_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k4_real_ns1 X1)) (u1_struct_0 (k4_real_ns1 np_1)))))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (m1_subset_1 (k3_funct_2 X0 X1 X2 X3) X1) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (m1_subset_1 (k1_seq_1 X0 X1) k1_numbers) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(v7_ordinal1\ X1))\Rightarrow(\\ & (v1_funct_1\ (k1_pdiff_1\ X0\ X1))\wedge((v1_funct_2\ (k1_pdiff_1\ X0\ X1) \\ & (k1_euclid\ X1)\ k1_numbers)\wedge(m1_subset_1\ (k1_pdiff_1\ X0\ X1)\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ (k1_euclid\ X1)\ k1_numbers)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2_struct_0\ X1)\wedge \\ & ((v1_normsp_1\ X1)\wedge(l1_normsp_1\ X1)))\Rightarrow((X1 = k4_real_ns1\ X0)\Leftrightarrow \\ & ((u1_struct_0\ X1 = k1_euclid\ X0)\wedge((k4_struct_0\ X1 = k5_euclid\ X0)\wedge \\ & ((r1_funct_2\ (k2_zfmisc_1\ (u1_struct_0\ X1)\ (u1_struct_0\ X1)) \\ & (u1_struct_0\ X1)\ (k2_zfmisc_1\ (k1_euclid\ X0)\ (k1_euclid\ X0))\ (\\ & k1_euclid\ X0)\ (u1_algstr_0\ X1)\ (k1_real_ns1\ X0))\wedge((r1_funct_2 \\ & (k2_zfmisc_1\ k1_numbers\ (u1_struct_0\ X1))\ (u1_struct_0\ X1)\ (k2_zfmisc_1 \\ & k1_numbers\ (k1_euclid\ X0))\ (k1_euclid\ X0)\ (u1_rlvect_1\ X1)\ (k2_real_ns1 \\ & X0))\wedge(r1_funct_2\ (u1_struct_0\ X1)\ k1_numbers\ (k1_euclid\ X0)\ k1_numbers \\ & (u1_normsp_0\ X1)\ (k3_real_ns1\ X0)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow(\forall X2. \\ & ((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ (u1_struct_0\ (k4_real_ns1\ X1)) \\ & (u1_struct_0\ (k4_real_ns1\ np_1))))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ (u1_struct_0\ (k4_real_ns1\ X1))\ (u1_struct_0\ (k4_real_ns1 \\ & np_1))))))\Rightarrow((X2 = k4_pdiff_1\ X0\ X1)\Leftrightarrow(\forall X3.(m1_subset_1 \\ & X3\ (u1_struct_0\ (k4_real_ns1\ X1)))\Rightarrow(k3_funct_2\ (u1_struct_0 \\ & (k4_real_ns1\ X1))\ (u1_struct_0\ (k4_real_ns1\ np_1))\ X2\ X3 = k12_finseq_1 \\ & k1_numbers\ (k1_seq_1\ (k1_pdiff_1\ X0\ X1)\ X3)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xcplx_0\ X0) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered\ X1)\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v3_valued_0\ X2)) \quad (21)$$

Theorem 1

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