

t1_pdiff_1 (TM-
Siof2DBix35XuPrERJWHcCajTLTnWiEPu)

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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 $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k1_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

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.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \Rightarrow (k1_rvsum_1 X0 = k10_xtuple_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\exists X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\wedge((v1_xboole_0 X2)\wedge((v1_relat_1 X2)\wedge((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)))) \quad (6)$$

Assume the following.

$$\forall X0.(m2_subset_1 X0 k1_numbers k5_numbers)\Rightarrow(\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers)\Rightarrow((X0 \in k2_finseq_1 X1)\Rightarrow(v2_funct_2 (k1_pdiff_1 X0 X1) k1_numbers))) \quad (7)$$

Assume the following.

$$(v3_funct_2 (k1_pdiff_1 np_1 np_1) (k1_euclid np_1) k1_numbers)\wedge((k1_relset_1 (k1_euclid np_1) (k1_pdiff_1 np_1 np_1) = k1_euclid np_1)\wedge((k1_rvsum_1 (k1_pdiff_1 np_1 np_1) = k1_numbers)\wedge(\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow((k1_seq_1 (k1_pdiff_1 np_1 np_1) (k12_finseq_1 k1_numbers X0) = X0)\wedge(k1_funct_1 (k2_funct_1 (k1_pdiff_1 np_1 np_1)) X0 = k12_finseq_1 k1_numbers X0)))))) \quad (8)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (9)$$

Assume the following.

$$v3_membered k1_numbers \quad (10)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (11)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow((v1_funct_1 (k1_pdiff_1 X0 X1))\wedge((v1_funct_2 (k1_pdiff_1 X0 X1) (k1_euclid X1) k1_numbers)\wedge(m1_subset_1 (k1_pdiff_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X1) k1_numbers)))))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow((v2_funct_2 X1 X0)\Leftrightarrow(k2_relset_1 X0 X1 = X0)) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (((X1 \neq k1_xboole_0) \Rightarrow ((v1_funct_2 X2 X0 \\ & X1) \Leftrightarrow (X0 = k1_relset_1 X0 X2))) \wedge ((X1 = k1_xboole_0) \Rightarrow ((v1_funct_2 \\ & X2 X0 X1) \Leftrightarrow (X2 = k1_xboole_0)))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v3_membered X1) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v3_valued_0 X2)) \end{aligned} \quad (19)$$

Theorem 1

$$\begin{aligned} & (\forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow ((X0 \in k2_finseq_1 X1) \Rightarrow \\ & ((k1_relset_1 (k1_euclid X1) (k1_pdiff_1 X0 X1) = k1_euclid X1) \wedge \\ & (k1_rvsum_1 (k1_pdiff_1 X0 X1) = k1_numbers)))) \wedge (\forall X0. \\ & (m1_subset_1 X0 k1_numbers) \Rightarrow ((k1_seq_1 (k1_pdiff_1 np_1 np_1) \\ & (k12_finseq_1 k1_numbers X0) = X0) \wedge (k1_funct_1 (k2_funct_1 (k1_pdiff_1 \\ & np_1 np_1)) X0 = k12_finseq_1 k1_numbers X0))) \end{aligned}$$