

t3_pdiff_9

(TMWUmqcj9cTvMyWyXPoYoBdjAfpoYranPLQ)

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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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $k1_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k1_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v1_funct_1 (k2_funct_1 (k1_pdiff_1 np_1 np_1))) \wedge (v1_funct_2 \\ & (k2_funct_1 (k1_pdiff_1 np_1 np_1)) k1_numbers (k1_euclid np_1)) \wedge \\ & (m1_subset_1 (k2_funct_1 (k1_pdiff_1 np_1 np_1)) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers (k1_euclid np_1)))))) \wedge ((v2_funct_1 \\ & (k2_funct_1 (k1_pdiff_1 np_1 np_1))) \wedge ((k9_xtuple_0 (k2_funct_1 \\ & (k1_pdiff_1 np_1 np_1)) = k1_numbers) \wedge ((k10_xtuple_0 (k2_funct_1 \\ & (k1_pdiff_1 np_1 np_1)) = k1_euclid np_1) \wedge (\exists X0. ((v1_funct_1 \\ & X0) \wedge ((v1_funct_2 X0 k1_numbers (k1_euclid np_1)) \wedge (m1_subset_1 \\ & X0 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (k1_euclid np_1)))))) \wedge \\ & ((v3_funct_2 X0 k1_numbers (k1_euclid np_1)) \wedge (k2_funct_1 (k1_pdiff_1 \\ & np_1 np_1) = X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((r1_tarski (k10_xtuple_0 X0) (k9_xtuple_0 X1)) \Rightarrow (k9_xtuple_0 (k3_relat_1 X0 X1) = k9_xtuple_0 X0))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \Rightarrow (k1_rvsum_1 X0 = k10_xtuple_0 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (7)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (8)$$

Assume the following.

$$v3_membered k1_numbers \quad (9)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (10)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) k1_numbers)))))) \Rightarrow ((v1_funct_1 (k3_pdiff_1 X0 X1)) \wedge (m1_subset_1 (k3_pdiff_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) (k1_euclid np_1)))))) \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \Rightarrow (m1_subset_1 (k1_rvsum_1 X0) (k1_zfmisc_1 k1_numbers)) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((v1_funct_1\ X1) \wedge (m1_subset_1 \\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k1_euclid\ X0)\ k1_numbers)))) \Rightarrow (\\ k3_pdiff_1\ X0\ X1 = k3_relat_1\ X1\ (k2_funct_1\ (k1_pdiff_1\ np_1\ np_1)))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (k1_euclid\ X0 = k4_finseq_2\ X0\ k1_numbers) \quad (15)$$

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

$$\begin{aligned} \forall X0.(m2_subset_1\ X0\ k1_numbers\ k5_numbers) \Rightarrow (\forall X1. \\ ((v1_funct_1\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (\\ k1_euclid\ X0)\ k1_numbers)))) \Rightarrow (k1_relset_1\ (k1_euclid\ X0)\ (k3_pdiff_1 \\ X0\ X1) = k1_relset_1\ (k1_euclid\ X0)\ X1)) \end{aligned}$$