

t6_pdiff_9

(TMZdc3f8bkzNRnHcUt9JNMPcTuXgQfVDTToP)

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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 $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $k1_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_rvsum_1 : \iota \Rightarrow \iota$ 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 $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (\\ & k1_euclid X0) k1_numbers)))) \Rightarrow (k1_relset_1 (k1_euclid X0) (k3_pdiff_1 \\ & X0 X1) = k1_relset_1 (k1_euclid X0) X1)) \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& (\forall X0. (m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow ((X0 \in k2_finseq_1 X1) \Rightarrow \\
& ((k1_relset_1 (k1_euclid X1) (k1_pdiff_1 X0 X1) = k1_euclid X1) \wedge \\
& (k1_rvsum_1 (k1_pdiff_1 X0 X1) = k1_numbers)))) \wedge (\forall X0. \\
& (m1_subset_1 X0 k1_numbers) \Rightarrow ((k1_seq_1 (k1_pdiff_1 np_1 np_1) \\
& (k12_finseq_1 k1_numbers X0) = X0) \wedge (k1_funct_1 (k2_funct_1 (k1_pdiff_1 \\
& np_1 np_1)) X0 = k12_finseq_1 k1_numbers X0)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\
& ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 \\
& (k3_relat_1 X1 X2) X0 = k1_funct_1 X2 (k1_funct_1 X1 X0))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{5}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 \\
& X0))) \Rightarrow (k1_seq_1 X0 X1 = k1_funct_1 X0 X1)
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (\\
& k1_relset_1 X0 X1 = k9_xtuple_0 X1)
\end{aligned} \tag{8}$$

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.

$$\begin{aligned} \forall X0. \forall X1. ((v7_ordinal1 \ X0) \wedge ((v1_funct_1 \ X1) \wedge (m1_subset_1 \\ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k1_euclid \ X0) \ k1_numbers)))) \Rightarrow \\ ((v1_funct_1 \ (k3_pdiff_1 \ X0 \ X1)) \wedge (m1_subset_1 \ (k3_pdiff_1 \ X0 \\ X1) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k1_euclid \ X0) \ (k1_euclid \ np_1)))))) \end{aligned} \quad (13)$$

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.

$$\forall X0. \forall X1. ((v1_relat_1 \ X1) \wedge ((v5_relat_1 \ X1 \ X0) \wedge (\\ v1_funct_1 \ X1))) \Rightarrow (\forall X2. (X2 \in \ k9_xtuple_0 \ X1) \Rightarrow (k7_partfun1 \\ X0 \ X1 \ X2 = \ k1_funct_1 \ X1 \ X2)) \quad (15)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow (\forall X1. ((v1_funct_1 \ X1) \wedge (m1_subset_1 \\ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k1_euclid \ X0) \ k1_numbers)))) \Rightarrow (\\ k3_pdiff_1 \ X0 \ X1 = \ k3_relat_1 \ X1 \ (k2_funct_1 \ (k1_pdiff_1 \ np_1 \ np_1)))) \quad (16)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (17)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \\ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow ((v4_relat_1 \ X2 \ X0) \wedge (v5_relat_1 \ X2 \ X1)) \quad (18)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \\ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v1_relat_1 \ X2) \quad (19)$$

Assume the following.

$$\forall X0. \forall X1. (v3_membered \ X1) \Rightarrow (\forall X2. (m1_subset_1 \\ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v3_valued_0 \ X2)) \quad (20)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (\\ & k1_euclid X0) k1_numbers)))) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ & (k1_euclid X0)) \Rightarrow ((X2 \in k1_relset_1 (k1_euclid X0) X1) \Rightarrow ((k1_funct_1 \\ & (k3_pdiff_1 X0 X1) X2 = k12_finseq_1 k1_numbers (k1_seq_1 X1 X2)) \wedge \\ & (k7_partfun1 (k1_euclid np_1) (k3_pdiff_1 X0 X1) X2 = k12_finseq_1 \\ & k1_numbers (k7_partfun1 k1_numbers X1 X2)))))) \end{aligned}$$