

t4_pdiff_9
(TMaEwC3LdJRKfitxxHGycJrPfkrydRCiNPB)

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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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k3_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow ((r1_tarski X0 (k9_xtuple_0 X1)) \Rightarrow (k9_xtuple_0 (k5_relat_1 X1 X0) = X0)) \quad (1)$$

Assume the following.

$$\forall X0. (m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) k1_numbers)))) \Rightarrow (k1_relset_1 (k1_euclid X0) (k3_pdiff_1 X0 X1) = k1_relset_1 (k1_euclid X0) X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 X0 X1 X2 X3 = k5_relat_1 X2 X3) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (6)$$

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.

$$\begin{aligned} &\forall X0.\forall X1.((v7_ordinal1 X0)\wedge((v1_funct_1 X1)\wedge(m1_subset_1 \\ &X1 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) k1_numbers))))\Rightarrow \\ &((v1_funct_1 (k3_pdfiff_1 X0 X1))\wedge(m1_subset_1 (k3_pdfiff_1 X0 \\ &X1) (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) (k1_euclid np_1)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge \\ &(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v1_funct_1 \\ &(k2_partfun1 X0 X1 X2 X3))\wedge(m1_subset_1 (k2_partfun1 X0 X1 X2 X3) \\ &(k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (14)$$

Theorem 1

$$\begin{aligned} &\forall X0.(m2_subset_1 X0 k1_numbers k5_numbers)\Rightarrow(\forall X1. \\ &\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ &(k1_euclid X0) k1_numbers))))\Rightarrow((r1_tarski X1 (k1_relset_1 (k1_euclid \\ &X0) X2))\Rightarrow(k1_relset_1 (k1_euclid X0) (k2_partfun1 (k1_euclid \\ &X0) (k1_euclid np_1) (k3_pdfiff_1 X0 X2) X1) = X1))) \end{aligned}$$