

t10_pdiff_2

(TMGq8myLq3mpE1qCiCE8p9qs7BWnDbAaRNQ)

October 27, 2020

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 $np_2 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarSKI : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pdiff_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_fdiff_1 : \iota \Rightarrow o$ be given. Let $v2_fdiff_1 : \iota \Rightarrow o$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ (k1_euclid np_2) k1_numbers)))) \Rightarrow (\forall X1.(m2_finseq_2 X1 \\ k1_numbers (k1_euclid np_2)) \Rightarrow ((\exists X2.(m1_subset_1 X2 k1_numbers) \wedge \\ (\exists X3.(m1_subset_1 X3 k1_numbers) \wedge ((X1 = k10_finseq_1 X2 \\ X3) \wedge (r1_fdiff_1 (k1_pdiff_2 np_2 np_2 X0 X1) X3)))) \Leftrightarrow (r3_pdiff_1 \\ np_2 np_2 X0 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \tag{3}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X0 \\ & k5_numbers)\wedge((m1_subset_1 X1 k5_numbers)\wedge((v1_funct_1 X2)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) k1_numbers))))\wedge \\ & (m1_subset_1 X3 (k1_euclid X0))))\Rightarrow((v1_funct_1 (k1_pdiff_2 \\ & X0 X1 X2 X3))\wedge(m1_subset_1 (k1_pdiff_2 X0 X1 X2 X3) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers k1_numbers))))\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow((r1_diff_1 \\ & X0 X1)\Leftrightarrow(\exists X2.(m1_rcomp_1 X2 X1)\wedge((r1_tarski X2 (k1_relset_1 \\ & k1_numbers X0))\wedge(\exists X3.((v1_funct_1 X3)\wedge((v3_diff_1 X3)\wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\wedge \\ & (\exists X4.((v1_funct_1 X4)\wedge((v2_diff_1 X4)\wedge(m1_subset_1 \\ & X4 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\wedge(\forall X5. \\ & (m1_subset_1 X5 k1_numbers)\Rightarrow((X5 \in X2)\Rightarrow(k9_real_1 (k1_seq_1 X0 \\ & X5) (k1_seq_1 X0 X1) = k7_real_1 (k1_seq_1 X3 (k9_real_1 X5 X1)) (\\ & k1_seq_1 X4 (k9_real_1 X5 X1)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k1_euclid np_2) k1_numbers))))\Rightarrow(\forall X1.(m2_finseq_2 X1 \\ & k1_numbers (k1_euclid np_2))\Rightarrow((r3_pdiff_1 np_2 np_2 X0 X1)\Leftrightarrow \\ & (\exists X2.(m1_subset_1 X2 k1_numbers)\wedge(\exists X3.(m1_subset_1 \\ & X3 k1_numbers)\wedge((X1 = k10_finseq_1 X2 X3)\wedge(\exists X4.(m1_rcomp_1 \\ & X4 X3)\wedge((r1_tarski X4 (k1_relset_1 k1_numbers (k1_pdiff_2 np_2 \\ & np_2 X0 X1))))\wedge(\exists X5.((v1_funct_1 X5)\wedge((v3_diff_1 X5)\wedge \\ & (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\wedge \\ & (\exists X6.((v1_funct_1 X6)\wedge((v2_diff_1 X6)\wedge(m1_subset_1 \\ & X6 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\wedge(\forall X7. \\ & (m1_subset_1 X7 k1_numbers)\Rightarrow((X7 \in X4)\Rightarrow(k9_real_1 (k1_seq_1 (\\ & k1_pdiff_2 np_2 np_2 X0 X1) X7) (k1_seq_1 (k1_pdiff_2 np_2 np_2 \\ & X0 X1) X3) = k7_real_1 (k1_seq_1 X5 (k9_real_1 X7 X3)) (k1_seq_1 X6 \\ & (k9_real_1 X7 X3)))))))))) \end{aligned}$$