

t18_pdiff_2
(TMZr7JfMNL7wArhbcSkrhnFyAGJj97ubJFc)

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 $m1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pdiff_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $v3_funct_1 : \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k3_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_comseq_2 : \iota \Rightarrow o$ be given. Let $k20_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k37_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k47_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_seq_2 : \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ 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 $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v2_relat_1 \\
& X1) \wedge ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\
& ((v1_fdiff_1 X1 k6_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers k1_numbers)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge \\
& ((v3_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers k1_numbers) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow ((\\
& k2_relset_1 k1_numbers X2 = k1_tarski X0) \Rightarrow ((v2_comseq_2 X2) \wedge (\\
& (k2_seq_2 X2 = X0) \wedge ((v2_comseq_2 (k3_valued_1 k5_numbers k1_numbers \\
& k1_numbers X1 X2)) \wedge (k2_seq_2 (k3_valued_1 k5_numbers k1_numbers \\
& k1_numbers X1 X2) = X0))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& (k1_relset_1 (k1_euclid np_2) (k1_pdiff_1 np_2 np_2) = k1_euclid \\
& np_2) \wedge ((k2_relset_1 k1_numbers (k1_pdiff_1 np_2 np_2) = k1_numbers) \wedge \\
& (\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_numbers) \Rightarrow (k1_seq_1 (k1_pdiff_1 np_2 np_2) (k10_finseq_1 \\
& X0 X1) = X1))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_numbers) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers (k1_euclid \\
& np_2)) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k1_euclid np_2) k1_numbers)))) \Rightarrow (((X2 = k10_finseq_1 \\
& X0 X1) \wedge (r3_pdiff_1 np_2 np_2 X3 X2)) \Rightarrow (k11_pdiff_1 np_2 np_2 \\
& X3 X2 = k1_fdiff_1 (k1_pdiff_2 np_2 np_2 X3 X2) X1))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad k1_numbers k1_numbers)))) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\
& \quad (m1_rcomp_1 X2 X1) \Rightarrow (((r1_fdiff_1 X0 X1) \wedge (r1_tarski X2 (k1_relset_1 \\
& \quad k1_numbers X0))) \Rightarrow (\forall X3.((v2_relat_1 X3) \wedge ((v1_funct_1 \\
& X3) \wedge ((v1_funct_2 X3 k5_numbers k1_numbers) \wedge ((v1_fdiff_1 X3 k6_numbers) \wedge \\
& (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers))))))) \Rightarrow \\
& \quad (\forall X4.((v1_funct_1 X4) \wedge ((v3_funct_1 X4) \wedge ((v1_funct_2 \\
& X4 k5_numbers k1_numbers) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers k1_numbers)))))) \Rightarrow (((k2_relset_1 k1_numbers X4 = k1_tarski \\
& X1) \wedge (r1_tarski (k2_relset_1 k1_numbers (k3_valued_1 k5_numbers \\
& k1_numbers k1_numbers X3 X4)) X2) \Rightarrow ((v2_comseq_2 (k20_valued_1 \\
& k5_numbers k1_numbers k1_numbers (k37_valued_1 k5_numbers k1_numbers \\
& X3) (k47_valued_1 k5_numbers k1_numbers k1_numbers (k8_funct_2 \\
& k5_numbers k1_numbers k1_numbers (k3_valued_1 k5_numbers k1_numbers \\
& k1_numbers X3 X4) X0) (k8_funct_2 k5_numbers k1_numbers k1_numbers \\
& X4 X0))) \wedge (k1_fdiff_1 X0 X1 = k2_seq_2 (k20_valued_1 k5_numbers \\
& k1_numbers k1_numbers (k37_valued_1 k5_numbers k1_numbers X3) \\
& (k47_valued_1 k5_numbers k1_numbers k1_numbers (k8_funct_2 k5_numbers \\
& k1_numbers k1_numbers (k3_valued_1 k5_numbers k1_numbers k1_numbers \\
& X3 X4) X0) (k8_funct_2 k5_numbers k1_numbers k1_numbers X4 X0)))))))))) \Rightarrow \\
& \quad (5)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad (k1_euclid np_2) k1_numbers)))) \Rightarrow (\forall X1.(m2_finseq_2 X1 \\
& \quad k1_numbers (k1_euclid np_2)) \Rightarrow ((r3_pdiff_1 np_2 np_2 X0 X1) \Leftrightarrow \\
& \quad (\exists X2.(m1_subset_1 X2 k1_numbers) \wedge (\exists X3.(m1_subset_1 \\
& \quad X3 k1_numbers) \wedge ((X1 = k10_finseq_1 X2 X3) \wedge (\exists X4.(m1_rcomp_1 \\
& \quad X4 X3) \wedge ((r1_tarski X4 (k1_relset_1 k1_numbers (k1_pdiff_2 np_2 \\
& \quad np_2 X0 X1))) \wedge (\exists X5.((v1_funct_1 X5) \wedge ((v3_fdiff_1 X5) \wedge \\
& (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \wedge \\
& \quad (\exists X6.((v1_funct_1 X6) \wedge ((v2_fdiff_1 X6) \wedge (m1_subset_1 \\
& \quad X6 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \wedge (\forall X7. \\
& \quad (m1_subset_1 X7 k1_numbers) \Rightarrow ((X7 \in X4) \Rightarrow (k9_real_1 (k1_seq_1 (\\
& \quad k1_pdiff_2 np_2 np_2 X0 X1) X7) (k1_seq_1 (k1_pdiff_2 np_2 np_2 \\
& \quad X0 X1) X3) = k7_real_1 (k1_seq_1 X5 (k9_real_1 X7 X3)) (k1_seq_1 X6 \\
& \quad (k9_real_1 X7 X3)))))))))) \Rightarrow \\
& \quad (6)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \quad (7)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (m1_finseq_2 X1 X0) \Rightarrow (\forall X2. (m2_finseq_2 \\
& \quad X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (8)
\end{aligned}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X0 \\ & \quad k5_numbers)\wedge((m1_subset_1 X1 k5_numbers)\wedge((v1_funct_1 X2)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) k1_numbers))))\wedge \\ & \quad (m1_subset_1 X3 (k1_euclid X0))))\Rightarrow((v1_funct_1 (k1_pdfiff_2 \\ & \quad X0 X1 X2 X3))\wedge(m1_subset_1 (k1_pdfiff_2 X0 X1 X2 X3) (k1_zfmisc_1 \\ & \quad (k2_zfmisc_1 k1_numbers k1_numbers)))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (14)$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad (k1_euclid\ np_2) k1_numbers)))) \Rightarrow (\forall X1.(m2_finseq_2 X1 \\
& \quad k1_numbers (k1_euclid\ np_2)) \Rightarrow (\forall X2.(m1_rcomp_1 X2 (k1_seq_1 \\
& \quad (k1_pdiff_1\ np_2\ np_2) X1)) \Rightarrow (((r3_pdiff_1\ np_2\ np_2 X0 X1) \wedge \\
& \quad (r1_tarski X2 (k1_relset_1 k1_numbers (k1_pdiff_2\ np_2\ np_2 \\
& \quad X0 X1)))) \Rightarrow (\forall X3.((v2_relat_1 X3) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 \\
& \quad X3 k5_numbers k1_numbers) \wedge ((v1_fdiff_1 X3 k6_numbers) \wedge (m1_subset_1 \\
& \quad X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow (\\
& \quad \forall X4.((v1_funct_1 X4) \wedge ((v3_funct_1 X4) \wedge ((v1_funct_2 X4 \\
& \quad k5_numbers k1_numbers) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad k5_numbers k1_numbers)))))) \Rightarrow (((k2_relset_1 k1_numbers X4 = k1_tarski \\
& \quad (k1_seq_1 (k1_pdiff_1\ np_2\ np_2) X1)) \wedge (r1_tarski (k2_relset_1 \\
& \quad k1_numbers (k3_valued_1 k5_numbers k1_numbers k1_numbers X3 X4)) \\
& \quad X2)) \Rightarrow ((v2_comseq_2 (k20_valued_1 k5_numbers k1_numbers k1_numbers \\
& \quad (k37_valued_1 k5_numbers k1_numbers X3) (k47_valued_1 k5_numbers \\
& \quad k1_numbers k1_numbers (k8_funct_2 k5_numbers k1_numbers k1_numbers \\
& \quad (k3_valued_1 k5_numbers k1_numbers k1_numbers X3 X4) (k1_pdiff_2 \\
& \quad np_2\ np_2 X0 X1)) (k8_funct_2 k5_numbers k1_numbers k1_numbers \\
& \quad X4 (k1_pdiff_2\ np_2\ np_2 X0 X1)))) \wedge (k11_pdiff_1\ np_2\ np_2 \\
& \quad X0 X1 = k2_seq_2 (k20_valued_1 k5_numbers k1_numbers k1_numbers \\
& \quad (k37_valued_1 k5_numbers k1_numbers X3) (k47_valued_1 k5_numbers \\
& \quad k1_numbers k1_numbers (k8_funct_2 k5_numbers k1_numbers k1_numbers \\
& \quad (k3_valued_1 k5_numbers k1_numbers k1_numbers X3 X4) (k1_pdiff_2 \\
& \quad np_2\ np_2 X0 X1)) (k8_funct_2 k5_numbers k1_numbers k1_numbers \\
& \quad X4 (k1_pdiff_2\ np_2\ np_2 X0 X1)))))))))
\end{aligned}$$