

112_pdiff_2 (TMSQAvyGhLZwvNrVkfi- AqF3aSgQBt1mKPmv)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pdiff_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v3_fdiff_1 : \iota \Rightarrow o$ be given. Let $v2_fdiff_1 : \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k10_finseq_1 X0 \quad (1)$$

$$X1 = k10_finseq_1 X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1. (m1_subset_1 \quad (2)$$

$$X1 k1_numbers) \Rightarrow (\forall X2. (m2_finseq_2 X2 k1_numbers (k1_euclid$$

$$np_2)) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1$$

$$(k2_zfmisc_1 (k1_euclid np_2) k1_numbers)))) \Rightarrow (((X2 = k10_finseq_1$$

$$X0 X1) \wedge (r3_pdiff_1 np_2 np_1 X3 X2)) \Rightarrow (r1_fdiff_1 (k1_pdiff_2$$

$$np_2 np_1 X3 X2) X0))))$$

Assume the following.

$$((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \quad (3)$$

$$((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers))$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \quad (4)$$

$$((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers))$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X0 \\ & k5_numbers)\wedge((m1_subset_1 X1 k5_numbers)\wedge((v1_funct_1 X2)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) k1_numbers))))\wedge \\ & (m1_subset_1 X3 (k1_euclid X0))))\Rightarrow((v1_funct_1 (k1_pdiff_2 \\ & X0 X1 X2 X3))\wedge(m1_subset_1 (k1_pdiff_2 X0 X1 X2 X3) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers)))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers k1_numbers))))\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow((r1_fdiff_1 \\ & X0 X1)\Rightarrow(\forall X2.(m1_subset_1 X2 k1_numbers)\Rightarrow((X2 = k1_fdiff_1 \\ & X0 X1)\Leftrightarrow(\exists X3.(m1_rcomp_1 X3 X1)\wedge((r1_tarski X3 (k1_relset_1 \\ & k1_numbers X0))\wedge(\exists X4.((v1_funct_1 X4)\wedge((v3_fdiff_1 X4)\wedge \\ & (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\wedge \\ & (\exists X5.((v1_funct_1 X5)\wedge((v2_fdiff_1 X5)\wedge(m1_subset_1 \\ & X5 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\wedge((X2 = \\ & k1_seq_1 X4 np_1)\wedge(\forall X6.(m1_subset_1 X6 k1_numbers)\Rightarrow(\\ & (X6 \in X3)\Rightarrow(k9_real_1 (k1_seq_1 X0 X6) (k1_seq_1 X0 X1) = k7_real_1 \\ & (k1_seq_1 X4 (k9_real_1 X6 X1)) (k1_seq_1 X5 (k9_real_1 X6 X1)))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (11)$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\
& (m2_finseq_2 X3 k1_numbers (k1_euclid np_2)) \Rightarrow (\forall X4.((\\
& v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid \\
& np_2) k1_numbers)))) \Rightarrow (((X3 = k10_finseq_1 X0 X1) \wedge (r3_pdiff_1 \\
& np_2 np_1 X4 X3)) \Rightarrow ((X2 = k1_fdiff_1 (k1_pdiff_2 np_2 np_1 X4 \\
& X3) X0) \Leftrightarrow (\exists X5.(m1_subset_1 X5 k1_numbers) \wedge (\exists X6. \\
& (m1_subset_1 X6 k1_numbers) \wedge ((X3 = k10_finseq_1 X5 X6) \wedge (\exists X7. \\
& (m1_rcomp_1 X7 X5) \wedge ((r1_tarski X7 (k1_relset_1 k1_numbers (k1_pdiff_2 \\
& np_2 np_1 X4 X3))) \wedge (\exists X8.((v1_funct_1 X8) \wedge ((v3_fdiff_1 \\
& X8) \wedge (m1_subset_1 X8 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \wedge \\
& (\exists X9.((v1_funct_1 X9) \wedge ((v2_fdiff_1 X9) \wedge (m1_subset_1 \\
& X9 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \wedge ((X2 = \\
& k1_seq_1 X8 np_1) \wedge (\forall X10.(m1_subset_1 X10 k1_numbers) \Rightarrow \\
& ((X10 \in X7) \Rightarrow (k9_real_1 (k1_seq_1 (k1_pdiff_2 np_2 np_1 X4 X3) \\
& X10) (k1_seq_1 (k1_pdiff_2 np_2 np_1 X4 X3) X5) = k7_real_1 (k1_seq_1 \\
& X8 (k9_real_1 X10 X5)) (k1_seq_1 X9 (k9_real_1 X10 X5))))))))))))))
\end{aligned}$$