

t17_pdiff_7 (TMcGTbYew- STB15hDYVdEMoidTRd2Erv3sJU)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k6_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $k1_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v2_valued_0 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v4_valued_0 : \iota \Rightarrow o$ be given. Let $v5_valued_0 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X0 k5_numbers)) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 k5_numbers) \Rightarrow (\neg(r1_xxreal_0 np_1 X2) \wedge ((r1_xxreal_0 X2 X0) \wedge \\ & ((X1 \neq k6_numbers) \wedge (k1_finseq_7 k1_numbers (k5_euclid X0) X2 X1 = \\ & k5_euclid X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X0 k5_numbers)\wedge \\ & ((m1_subset_1 X1 k5_numbers)\wedge(m1_subset_1 X2 (k1_euclid X0))))\Rightarrow \quad (5) \\ & (k6_pdiff_1 X0 X1 X2 = k5_pdiff_1 X1 X2) \end{aligned}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \quad (7) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \exists X0.(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & k5_numbers)))\wedge((\neg v1_xboole_0 X0)\wedge((v1_relat_1 X0)\wedge((v4_relat_1 \\ & X0 k5_numbers)\wedge((v5_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge \\ & ((v1_partfun1 X0 k5_numbers)\wedge((v1_funct_2 X0 k5_numbers k5_numbers)\wedge \\ & ((v1_valued_0 X0)\wedge((v2_valued_0 X0)\wedge((v3_valued_0 X0)\wedge((v4_valued_0 \\ & X0)\wedge(v5_valued_0 X0)))))))))) \quad (8) \end{aligned}$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (9)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Rightarrow(m2_finseq_1 X2 X0)) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X0 k5_numbers)\wedge \\ & ((m1_subset_1 X1 k5_numbers)\wedge(m1_subset_1 X2 (k1_euclid X0))))\Rightarrow \\ & ((v1_funct_1 (k6_pdiff_1 X0 X1 X2))\wedge((v1_funct_2 (k6_pdiff_1 \\ & X0 X1 X2) k1_numbers (k1_euclid X0))\wedge(m1_subset_1 (k6_pdiff_1 \\ & X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (k1_euclid X0)))))) \quad (12) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(m1_finseq_1 X1 k1_numbers))\Rightarrow((v1_relat_1 (k5_pdiff_1 X0 X1))\wedge(v1_funct_1 (k5_pdiff_1 X0 X1))) \quad (13)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(m2_finseq_2 (k5_euclid X0) k1_numbers (k1_euclid X0)) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(m1_finseq_2 (k1_euclid X0) k1_numbers) \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers)\Rightarrow(\forall X1. \\ (m2_finseq_1 X1 k1_numbers)\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge(v1_funct_1 X2))\Rightarrow((X2 = k5_pdiff_1 X0 X1)\Leftrightarrow((k9_xtuple_0 X2 = k1_numbers)\wedge \\ \forall X3.(m1_subset_1 X3 k1_numbers)\Rightarrow(k1_funct_1 X2 X3 = k1_finseq_7 \\ k1_numbers X1 X0 X3)))))) \quad (17) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_xboole_0 X2)) \quad (18)$$

Assume the following.

$$\forall X0.(v6_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v7_ordinal1 X1)) \quad (19)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X0 k5_numbers))\Rightarrow \\ (\forall X1.(m1_subset_1 X1 k1_numbers)\Rightarrow(\forall X2.(m1_subset_1 X2 k5_numbers)\Rightarrow(\neg(r1_xxreal_0 np_1 X2)\wedge((r1_xxreal_0 X2 X0)\wedge \\ ((X1\neq k6_numbers)\wedge(k3_funct_2 k1_numbers (k1_euclid X0) (k6_pdiff_1 X0 X2 (k5_euclid X0)) X1 = k5_euclid X0)))))) \end{aligned}$$