

t38_pdiff_4

(TMV92PMj6PzdwqtY1woW4vvEhiMBqxq94oi)

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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 $np_3 : \iota$ 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 $r3_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $k4_pdiff_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k11_pdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m2_finseq_2 \\ & \quad X1 k1_numbers (k1_euclid np_3)) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge \\ (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid np_3) k1_numbers)))) \Rightarrow \\ & \quad (((r3_pdiff_1 np_3 np_1 X2 X1) \wedge ((r3_pdiff_1 np_3 np_2 X2 X1) \wedge \\ & \quad (r3_pdiff_1 np_3 np_3 X2 X1))) \Rightarrow (k4_pdiff_4 (k26_valued_1 (k1_euclid \\ & \quad np_3) k1_numbers X2 X0) X1 = k9_euclid np_3 (k4_pdiff_4 X2 X1) X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_2 X0 k1_numbers (k1_euclid np_3)) \Rightarrow (\forall X1. \\ & \quad ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (\\ & \quad \quad k1_euclid np_3) k1_numbers)))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge \\ (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid np_3) k1_numbers)))) \Rightarrow \\ & \quad (((r3_pdiff_1 np_3 np_1 X1 X0) \wedge ((r3_pdiff_1 np_3 np_2 X1 X0) \wedge \\ & \quad ((r3_pdiff_1 np_3 np_3 X1 X0) \wedge ((r3_pdiff_1 np_3 np_1 X2 X0) \wedge \\ & \quad ((r3_pdiff_1 np_3 np_2 X2 X0) \wedge (r3_pdiff_1 np_3 np_3 X2 X0)))))) \Rightarrow \\ & \quad (k4_pdiff_4 (k3_valued_1 (k1_euclid np_3) k1_numbers k1_numbers \\ & \quad X1 X2) X0 = k7_euclid np_3 (k4_pdiff_4 X1 X0) (k4_pdiff_4 X2 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\ & \quad (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2. \\ & \quad (m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 \\ & \quad X3 (k1_zfmisc_1 (k2_zfmisc_1 (k1_euclid X0) k1_numbers)))) \Rightarrow (\\ & \quad \forall X4.(m2_finseq_2 X4 k1_numbers (k1_euclid X0)) \Rightarrow ((r3_pdf_1 \\ X0 X1 X3 X4) \Rightarrow ((r3_pdf_1 X0 X1 (k26_valued_1 (k1_euclid X0) k1_numbers \\ X3 X2) X4) \wedge (k11_pdf_1 X0 X1 (k26_valued_1 (k1_euclid X0) k1_numbers \\ X3 X2) X4 = k8_real_1 X2 (k11_pdf_1 X0 X1 X3 X4))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\neg v1_xboole_0 np_3 \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v3_membered X1) \wedge \\ & (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X1)))) \wedge (v1_xreal_0 X3))) \Rightarrow (k26_valued_1 X0 X1 X2 X3 = k24_valued_1 \\ & X2 X3) \end{aligned} \quad (9)$$

Assume the following.

$$v3_membered k1_numbers \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v3_membered X1) \wedge \\ & (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X1)))) \wedge (v1_xreal_0 X3))) \Rightarrow ((v1_funct_1 (k26_valued_1 X0 X1 \\ X2 X3)) \wedge (m1_subset_1 (k26_valued_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 k1_numbers)))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v1_xreal_0\ X1)) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(\forall X1.(m1_subset_1 \\ & X1\ k1_numbers)\Rightarrow(\forall X2.(m2_finseq_2\ X2\ k1_numbers\ (k1_euclid \\ & np_3))\Rightarrow(\forall X3.((v1_funct_1\ X3)\wedge(m1_subset_1\ X3\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ (k1_euclid\ np_3)\ k1_numbers))))\Rightarrow(\forall X4.(\\ & (v1_funct_1\ X4)\wedge(m1_subset_1\ X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k1_euclid \\ & np_3)\ k1_numbers))))\Rightarrow(((r3_pdiff_1\ np_3\ np_1\ X3\ X2)\wedge((r3_pdiff_1 \\ & np_3\ np_2\ X3\ X2)\wedge((r3_pdiff_1\ np_3\ np_3\ X3\ X2)\wedge((r3_pdiff_1 \\ & np_3\ np_1\ X4\ X2)\wedge((r3_pdiff_1\ np_3\ np_2\ X4\ X2)\wedge(r3_pdiff_1 \\ & np_3\ np_3\ X4\ X2))))))\Rightarrow(k4_pdiff_4\ (k3_valued_1\ (k1_euclid\ np_3) \\ & k1_numbers\ k1_numbers\ (k26_valued_1\ (k1_euclid\ np_3)\ k1_numbers \\ & X3\ X0)\ (k26_valued_1\ (k1_euclid\ np_3)\ k1_numbers\ X4\ X1))\ X2 = k7_euclid \\ & np_3\ (k9_euclid\ np_3\ (k4_pdiff_4\ X3\ X2)\ X0)\ (k9_euclid\ np_3\ (\\ & k4_pdiff_4\ X4\ X2)\ X1)))))) \end{aligned}$$