

t14_diff_3

(TMS8Yb5YkyP26Hqg6CQ3EBFodHrr7xeoZPz)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_numbers : \iota$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_diff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xbool_0 : \iota \Rightarrow o$ 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. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
 & (m1_subset_1 X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow \\
 & (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k1_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow \\
 & (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 k1_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow \\
 & (k1_seq_1 (k1_seqfunc k1_numbers k1_numbers (k8_diff_1 (k3_valued_1 \\
 & k1_numbers k1_numbers k1_numbers X3 X4) X1) (k2_nat_1 X0 np_1)) \\
 & X2 = k7_real_1 (k1_seq_1 (k1_seqfunc k1_numbers k1_numbers (k8_diff_1 \\
 & X3 X1) (k2_nat_1 X0 np_1)) X2) (k1_seq_1 (k1_seqfunc k1_numbers \\
 & k1_numbers (k8_diff_1 X4 X1) (k2_nat_1 X0 np_1)) X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.((v1_funct_1 \\
& X4) \wedge ((v1_funct_2 X4 k1_numbers k1_numbers) \wedge (m1_subset_1 X4 (\\
& k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow (k1_seq_1 \\
& (k1_seqfunc k1_numbers k1_numbers (k8_diff_1 (k26_valued_1 k1_numbers \\
& k1_numbers X4 X1) X2) (k2_nat_1 X0 np_1)) X3 = k8_real_1 X1 (k1_seq_1 \\
& (k1_seqfunc k1_numbers k1_numbers (k8_diff_1 X4 X2) (k2_nat_1 \\
& X0 np_1)) X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{3}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered X1) \wedge \\
& (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))) \wedge (v1_xreal_0 X3))) \Rightarrow (k26_valued_1 X0 X1 X2 X3 = k24_valued_1 \\
& X2 X3)
\end{aligned} \tag{5}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1_xboole_0 \\
& X1) \wedge (v3_membered X1)) \wedge (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \wedge (v1_xreal_0 \\
& X3))) \Rightarrow ((v1_funct_1 (k24_valued_1 X2 X3)) \wedge (v1_partfun1 (k24_valued_1 \\
& X2 X3) X0))
\end{aligned} \tag{7}$$

Assume the following.

$$v3_membered k1_numbers \tag{8}$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \tag{9}$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \tag{10}$$

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.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xreal_0\ X0) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v1_partfun1\ X2\ X0)\Rightarrow(v1_funct_2\ X2\ X0\ X1)) \end{aligned} \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ k5_numbers)\Rightarrow(\forall X1.(m1_subset_1 \\ & X1\ k1_numbers)\Rightarrow(\forall X2.(m1_subset_1\ X2\ k1_numbers)\Rightarrow(\forall X3. \\ & (m1_subset_1\ X3\ k1_numbers)\Rightarrow(\forall X4.((v1_funct_1\ X4)\wedge((\\ & v1_funct_2\ X4\ k1_numbers\ k1_numbers)\wedge(m1_subset_1\ X4\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ k1_numbers\ k1_numbers))))))\Rightarrow(\forall X5.((v1_funct_1 \\ & X5)\wedge((v1_funct_2\ X5\ k1_numbers\ k1_numbers)\wedge(m1_subset_1\ X5\ (\\ & k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers))))))\Rightarrow(k1_seq_1 \\ & (k1_seqfunc\ k1_numbers\ k1_numbers\ (k8_diff_1\ (k3_valued_1\ k1_numbers \\ & k1_numbers\ k1_numbers\ X4\ (k26_valued_1\ k1_numbers\ k1_numbers \\ & X5\ X1))\ X2)\ (k2_nat_1\ X0\ np_1))\ X3 = k7_real_1\ (k1_seq_1\ (k1_seqfunc \\ & k1_numbers\ k1_numbers\ (k8_diff_1\ X4\ X2)\ (k2_nat_1\ X0\ np_1))\ X3) \\ & (k8_real_1\ X1\ (k1_seq_1\ (k1_seqfunc\ k1_numbers\ k1_numbers\ (k8_diff_1 \\ & X5\ X2)\ (k2_nat_1\ X0\ np_1))\ X3)))))) \end{aligned}$$