

t10_diff_1

(TMFHB1BXARYL5axSmkbAoXdtVG1yP9XRhTV)

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Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_diff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
 & (m1_subset_1 X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow \\
 & (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k1_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow \\
 & (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 k1_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow \\
 & (k1_seq_1 (k1_seqfunc k1_numbers k1_numbers (k6_diff_1 (k3_valued_1 \\
 & k1_numbers k1_numbers k1_numbers X3 X4) X1) (k2_nat_1 X0 np_1)) \\
 & X2 = k7_real_1 (k1_seq_1 (k1_seqfunc k1_numbers k1_numbers (k6_diff_1 \\
 & X3 X1) (k2_nat_1 X0 np_1)) X2) (k1_seq_1 (k1_seqfunc k1_numbers \\
 & k1_numbers (k6_diff_1 X4 X1) (k2_nat_1 X0 np_1)) X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.((v1_funct_1 \\
& X4) \wedge ((v1_funct_2 X4 k1_numbers k1_numbers) \wedge (m1_subset_1 X4 (\\
& k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow (k1_seq_1 \\
& (k1_seqfunc k1_numbers k1_numbers (k6_diff_1 (k26_valued_1 k1_numbers \\
& k1_numbers X4 X1) X2) (k2_nat_1 X0 np_1)) X3 = k8_real_1 X1 (k1_seq_1 \\
& (k1_seqfunc k1_numbers k1_numbers (k6_diff_1 X4 X2) (k2_nat_1 \\
& X0 np_1)) X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered X1) \wedge \\
& (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))) \wedge (v1_xreal_0 X3))) \Rightarrow (k26_valued_1 X0 X1 X2 X3 = k24_valued_1 \\
& X2 X3)
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1_xboole_0 \\
& X1) \wedge (v3_membered X1)) \wedge (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \wedge (v1_xreal_0 \\
& X3))) \Rightarrow ((v1_funct_1 (k24_valued_1 X2 X3)) \wedge (v1_partfun1 (k24_valued_1 \\
& X2 X3) X0))
\end{aligned} \tag{4}$$

Assume the following.

$$v3_membered k1_numbers \tag{5}$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered X1) \wedge \\
& (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))) \wedge (v1_xreal_0 X3))) \Rightarrow ((v1_funct_1 (k26_valued_1 X0 X1 \\
& X2 X3)) \wedge (m1_subset_1 (k26_valued_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k1_numbers))))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1))) \Rightarrow ((v1_partfun1 X2 X0) \Rightarrow (v1_funct_2 X2 X0 X1))
\end{aligned} \tag{9}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 \\ & X4 k1_numbers) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge ((v1_funct_2 X5 \\ & k1_numbers k1_numbers) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers k1_numbers)))))) \Rightarrow (\forall X6.((v1_funct_1 X6) \wedge ((\\ & v1_funct_2 X6 k1_numbers k1_numbers) \wedge (m1_subset_1 X6 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow (k1_seq_1 (k1_seqfunc \\ & k1_numbers k1_numbers (k6_diff_1 (k3_valued_1 k1_numbers k1_numbers \\ & k1_numbers (k26_valued_1 k1_numbers k1_numbers X5 X1) (k26_valued_1 \\ & k1_numbers k1_numbers X6 X2)) X3) (k2_nat_1 X0 np_1)) X4 = k7_real_1 \\ & (k8_real_1 X1 (k1_seq_1 (k1_seqfunc k1_numbers k1_numbers (k6_diff_1 \\ & X5 X3) (k2_nat_1 X0 np_1)) X4)) (k8_real_1 X2 (k1_seq_1 (k1_seqfunc \\ & k1_numbers k1_numbers (k6_diff_1 X6 X3) (k2_nat_1 X0 np_1)) X4))))))))) \end{aligned}$$