

t34_seqfunc
(TMZHQ A4Mcy cShzwP7DVhSJT39sYBFRYBJQs)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $k4_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k47_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k4_partfun1 \\ & X0 k1_numbers)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & (k4_partfun1 X0 k1_numbers)))))) \Rightarrow (\forall X3. ((r1_seqfunc X0 \\ & k1_numbers X1 X3) \wedge (r1_seqfunc X0 k1_numbers X2 X3)) \Rightarrow (\forall X4. \\ & (m1_subset_1 X4 X0) \Rightarrow ((X4 \in X3) \Rightarrow ((r2_relset_1 k5_numbers k1_numbers \\ & (k3_valued_1 k5_numbers k1_numbers k1_numbers (k10_seqfunc X0 \\ & X1 X4) (k10_seqfunc X0 X2 X4)) (k10_seqfunc X0 (k6_seqfunc X0 X1 X2) \\ & X4)) \wedge ((r2_relset_1 k5_numbers k1_numbers (k47_valued_1 k5_numbers \\ & k1_numbers k1_numbers (k10_seqfunc X0 X1 X4) (k10_seqfunc X0 X2 \\ & X4)) (k10_seqfunc X0 (k7_seqfunc X0 X1 X2) X4)) \wedge (r2_relset_1 k5_numbers \\ & k1_numbers (k20_valued_1 k5_numbers k1_numbers k1_numbers (k10_seqfunc \\ & X0 X1 X4) (k10_seqfunc X0 X2 X4)) (k10_seqfunc X0 (k8_seqfunc X0 X1 \\ & X2) X4))))))))) \end{aligned}$$

(1)

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\
& (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\
& (\forall X2.(r2_seqfunc X0 X1 X2) \Leftrightarrow ((r1_seqfunc X0 k1_numbers X1 \\
& X2) \wedge (\exists X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& k2_zfmisc_1 X0 k1_numbers)))))) \wedge ((X2 = k1_relset_1 X0 X3) \wedge (\forall X4. \\
& (m1_subset_1 X4 X0) \Rightarrow ((X4 \in X2) \Rightarrow (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow \\
& (\neg(\neg r1_xxreal_0 X5 k6_numbers) \wedge (\forall X6.(m2_subset_1 X6 k1_numbers \\
& k5_numbers) \Rightarrow (\exists X7.(m2_subset_1 X7 k1_numbers k5_numbers) \wedge \\
& ((r1_xxreal_0 X6 X7) \wedge (r1_xxreal_0 X5 (k18_complex1 (k9_real_1 \\
& (k1_seq_1 (k1_seqfunc X0 k1_numbers X1 X7) X4) (k1_seq_1 X3 X4))))))))))))) \\
& (2)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\
& (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k4_partfun1 \\
& X0 k1_numbers)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\
& (k4_partfun1 X0 k1_numbers)))))) \Rightarrow (\forall X3.((r2_seqfunc X0 \\
& X1 X3) \wedge (r2_seqfunc X0 X2 X3)) \Rightarrow (\forall X4.(m1_subset_1 X4 X0) \Rightarrow \\
& ((X4 \in X3) \Rightarrow ((r2_relset_1 k5_numbers k1_numbers (k3_valued_1 k5_numbers \\
& k1_numbers k1_numbers (k10_seqfunc X0 X1 X4) (k10_seqfunc X0 X2 \\
& X4)) (k10_seqfunc X0 (k6_seqfunc X0 X1 X2) X4)) \wedge ((r2_relset_1 k5_numbers \\
& k1_numbers (k47_valued_1 k5_numbers k1_numbers k1_numbers (k10_seqfunc \\
& X0 X1 X4) (k10_seqfunc X0 X2 X4)) (k10_seqfunc X0 (k7_seqfunc X0 X1 \\
& X2) X4)) \wedge (r2_relset_1 k5_numbers k1_numbers (k20_valued_1 k5_numbers \\
& k1_numbers k1_numbers (k10_seqfunc X0 X1 X4) (k10_seqfunc X0 X2 \\
& X4)) (k10_seqfunc X0 (k8_seqfunc X0 X1 X2) X4)))))))))
\end{aligned}$$