

t17_seqfunc (TM-
PuV81kSdunpZeGd89Gv7LRvqWZnhzZh7J)

October 27, 2020

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 $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k4_partfun1 \\ & X0 k1_numbers)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & (k4_partfun1 X0 k1_numbers)))))) \Rightarrow (r2_relset_1 k5_numbers (k4_partfun1 \\ & X0 k1_numbers) (k5_seqfunc X0 (k8_seqfunc X0 X1 X2)) (k8_seqfunc \\ & X0 (k5_seqfunc X0 X1) (k5_seqfunc X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\ & (r2_relset_1 k5_numbers (k4_partfun1 X0 k1_numbers) (k3_seqfunc \\ & X0 (k5_seqfunc X0 X1)) (k5_seqfunc X0 (k3_seqfunc X0 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 X1) \wedge \\
& (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\
& ((v1_funct_1 (k5_seqfunc X0 X1)) \wedge ((v1_funct_2 (k5_seqfunc X0 \\
& X1) k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 (k5_seqfunc \\
& X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\
& \hspace{10em} (4)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 X1) \wedge \\
& (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\
& ((v1_funct_1 (k3_seqfunc X0 X1)) \wedge ((v1_funct_2 (k3_seqfunc X0 \\
& X1) k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 (k3_seqfunc \\
& X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\
& \hspace{10em} (5)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\
& (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k4_partfun1 \\
& X0 k1_numbers)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\
& (k4_partfun1 X0 k1_numbers)))))) \Rightarrow (k9_seqfunc X0 X1 X2 = k8_seqfunc \\
& X0 X2 (k3_seqfunc X0 X1)))) \Rightarrow \\
& \hspace{10em} (6)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\
& (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers)) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers)))))) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k4_partfun1 \\
& X0 k1_numbers)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\
& (k4_partfun1 X0 k1_numbers)))))) \Rightarrow (r2_relset_1 k5_numbers (k4_partfun1 \\
& X0 k1_numbers) (k5_seqfunc X0 (k9_seqfunc X0 X2 X1)) (k9_seqfunc \\
& X0 (k5_seqfunc X0 X2) (k5_seqfunc X0 X1)))) \Rightarrow
\end{aligned}$$