

t31\_seqfunc  
(TMdqqzBKEpF11Uzz8jqRY3yGL8onz3xYc13)

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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  $r1\_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge ( \\
& (v1\_funct\_2 X1 k5\_numbers (k4\_partfun1 X0 k1\_numbers)) \wedge (m1\_subset\_1 \\
& X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (k4\_partfun1 X0 k1\_numbers)))))) \Rightarrow \\
& (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (k4\_partfun1 \\
& X0 k1\_numbers)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\
& (k4\_partfun1 X0 k1\_numbers)))))) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\
& X0) \Rightarrow (((r1\_seqfunc X0 k1\_numbers X1 (k1\_tarski X3)) \wedge (r1\_seqfunc \\
& X0 k1\_numbers X2 (k1\_tarski X3))) \Rightarrow ((r2\_relset\_1 k5\_numbers k1\_numbers \\
& (k3\_valued\_1 k5\_numbers k1\_numbers k1\_numbers (k10\_seqfunc X0 \\
& X1 X3) (k10\_seqfunc X0 X2 X3)) (k10\_seqfunc X0 (k6\_seqfunc X0 X1 X2) \\
& X3)) \wedge ((r2\_relset\_1 k5\_numbers k1\_numbers (k47\_valued\_1 k5\_numbers \\
& k1\_numbers k1\_numbers (k10\_seqfunc X0 X1 X3) (k10\_seqfunc X0 X2 \\
& X3)) (k10\_seqfunc X0 (k7\_seqfunc X0 X1 X2) X3)) \wedge (r2\_relset\_1 k5\_numbers \\
& k1\_numbers (k20\_valued\_1 k5\_numbers k1\_numbers k1\_numbers (k10\_seqfunc \\
& X0 X1 X3) (k10\_seqfunc X0 X2 X3)) (k10\_seqfunc X0 (k8\_seqfunc X0 X1 \\
& X2) X3)))))))))
\end{aligned}$$

(1)

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge ( \\ & (v1\_funct\_2 X1 k5\_numbers (k4\_partfun1 X0 k1\_numbers)) \wedge (m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (k4\_partfun1 X0 k1\_numbers)))))) \Rightarrow \\ & (\forall X2.(r1\_seqfunc X0 k1\_numbers X1 X2) \Rightarrow (\forall X3.(m1\_subset\_1 \\ & X3 X0) \Rightarrow ((X3 \in X2) \Rightarrow (r1\_seqfunc X0 k1\_numbers X1 (k1\_tarski X3)))))) \\ & \hspace{15em} (2) \end{aligned}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge ( \\ & (v1\_funct\_2 X1 k5\_numbers (k4\_partfun1 X0 k1\_numbers)) \wedge (m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (k4\_partfun1 X0 k1\_numbers)))))) \Rightarrow \\ & (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (k4\_partfun1 \\ & X0 k1\_numbers)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\ & (k4\_partfun1 X0 k1\_numbers)))))) \Rightarrow (\forall X3.((r1\_seqfunc X0 \\ & k1\_numbers X1 X3) \wedge (r1\_seqfunc X0 k1\_numbers X2 X3)) \Rightarrow (\forall X4. \\ & (m1\_subset\_1 X4 X0) \Rightarrow ((X4 \in X3) \Rightarrow ((r2\_relset\_1 k5\_numbers k1\_numbers \\ & (k3\_valued\_1 k5\_numbers k1\_numbers k1\_numbers (k10\_seqfunc X0 \\ & X1 X4) (k10\_seqfunc X0 X2 X4)) (k10\_seqfunc X0 (k6\_seqfunc X0 X1 X2) \\ & X4)) \wedge ((r2\_relset\_1 k5\_numbers k1\_numbers (k47\_valued\_1 k5\_numbers \\ & k1\_numbers k1\_numbers (k10\_seqfunc X0 X1 X4) (k10\_seqfunc X0 X2 \\ & X4)) (k10\_seqfunc X0 (k7\_seqfunc X0 X1 X2) X4)) \wedge (r2\_relset\_1 k5\_numbers \\ & k1\_numbers (k20\_valued\_1 k5\_numbers k1\_numbers k1\_numbers (k10\_seqfunc \\ & X0 X1 X4) (k10\_seqfunc X0 X2 X4)) (k10\_seqfunc X0 (k8\_seqfunc X0 X1 \\ & X2) X4))))))))) \end{aligned}$$