

t31_fomodel0 (TMJ-
DaSadXAm61FTbRUtw1dib87MZpP89ZQL)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_fomodel0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_monoid_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 \\ & X0) X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0) X0)))) \Rightarrow ((k1_funct_1 (k5_fomodel0 X0 X2) (k12_finseq_1 \\ & X0 X1) = X1) \wedge (\forall X3.((\neg v1_xboole_0 X3) \wedge (m2_finseq_1 X3 X0)) \Rightarrow \\ & (k1_funct_1 (k5_fomodel0 X0 X2) (k1_monoid_0 X0 X3 (k12_finseq_1 \\ & X0 X1)) = k1_binop_1 X2 (k1_funct_1 (k5_fomodel0 X0 X2) X3) X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_finseq_1 X1 X0) \wedge (m1_finseq_1 X2 X0)) \Rightarrow (k1_monoid_0 X0 X1 X2 = k7_finseq_1 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((v5_relat_1 X1 X0) \wedge (v1_finseq_1 X1)) \Rightarrow (m2_finseq_1 X1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (m2_finseq_1 (k12_finseq_1 X0 X1) X0) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 \\ & X0) X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0) X0)))))) \Rightarrow ((k1_funct_1 (k5_fomodel0 X0 X2) (k12_finseq_1 \\ & X0 X1) = X1) \wedge (\forall X3.((v1_relat_1 X3) \wedge ((v5_relat_1 X3 X0) \wedge \\ & ((v1_funct_1 X3) \wedge (v1_finseq_1 X3)))))) \Rightarrow ((\neg v1_xboole_0 X3) \Rightarrow (k1_funct_1 \\ & (k5_fomodel0 X0 X2) (k7_finseq_1 X3 (k12_finseq_1 X0 X1)) = k1_binop_1 \\ & X2 (k1_funct_1 (k5_fomodel0 X0 X2) X3) X1)))))) \end{aligned}$$