

t68_modelc_2

(TMYgdMTCpempfjtz7pDvxfpGQgS5rhyi29Ad)

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Let $v1_modelc_2 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k25_modelc_2 : \iota \Rightarrow \iota$ be given. Let $k43_modelc_2 : \iota$ be given. Let $r7_modelc_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k29_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k30_modelc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k42_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r6_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k23_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_modelc_2 : \iota \Rightarrow o$ be given. Let $l1_modelc_2 : \iota \Rightarrow o$ 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 $k15_modelc_2 : \iota$ be given. Let $u1_modelc_2 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9_modelc_2 : \iota \Rightarrow o$ be given. Let $k47_modelc_2 : \iota$ be given. Let $k46_modelc_2 : \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k30_modelc_1 (k25_modelc_2 X0)))))) \Rightarrow \\
 & (\forall X2. (m1_subset_1 X2 (k25_modelc_2 X0)) \Rightarrow (\forall X3. (\\
 & m1_subset_1 X3 (u1_struct_0 (k42_modelc_2 X0 X1)))) \Rightarrow (\forall X4. \\
 & (m1_subset_1 X4 (u1_struct_0 (k42_modelc_2 X0 X1)))) \Rightarrow ((r6_modelc_2 \\
 & X0 X1 X2 (k23_modelc_2 (k42_modelc_2 X0 X1) X3 X4)) \Leftrightarrow (\exists X5. \\
 & (v7_ordinal1 X5) \wedge ((\forall X6. (v7_ordinal1 X6) \Rightarrow ((\neg r1_xreal_0 \\
 & X5 X6) \Rightarrow (r6_modelc_2 X0 X1 (k29_modelc_2 X0 X2 X6) X3)))) \wedge (r6_modelc_2 \\
 & X0 X1 (k29_modelc_2 X0 X2 X5) X4))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \quad \quad \forall X2.((\neg v2_struct_0 X2) \wedge ((v10_modelc_2 X2) \wedge (l1_modelc_2 \\
& \quad \quad X2))) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k15_modelc_2 \\
& \quad \quad (u1_modelc_2 X2)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad \quad k15_modelc_2 (u1_modelc_2 X2)))))) \Rightarrow (k21_modelc_2 X2 X3 (k7_modelc_2 \\
& \quad \quad X0 X1) = k23_modelc_2 X2 (k21_modelc_2 X2 X3 X0) (k21_modelc_2 X2 \\
& \quad \quad \quad X3 X1))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((v1_modelc_2 X0) \wedge (m1_finseq_1 X0 k5_numbers)) \wedge \\
& ((v1_modelc_2 X1) \wedge (m1_finseq_1 X1 k5_numbers))) \Rightarrow (v1_modelc_2 \\
& \quad (k7_modelc_2 X0 X1))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k30_modelc_1 (k25_modelc_2 X0)))))) \Rightarrow \\
& ((\neg v2_struct_0 (k42_modelc_2 X0 X1)) \wedge ((v9_modelc_2 (k42_modelc_2 \\
& \quad X0 X1)) \wedge (v10_modelc_2 (k42_modelc_2 X0 X1))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. ((m1_finseq_1 X0 k5_numbers) \wedge (m1_finseq_1 X1 k5_numbers)) \Rightarrow (m2_finseq_1 (k7_modelc_2 X0 X1) k5_numbers) \tag{6}$$

Assume the following.

$$\begin{aligned}
& (v1_funct_1 k47_modelc_2) \wedge ((v1_funct_2 k47_modelc_2 k15_modelc_2 \\
& (u1_modelc_2 (k42_modelc_2 k43_modelc_2 k46_modelc_2))) \wedge (m1_subset_1 \\
& \quad k47_modelc_2 (k1_zfmisc_1 (k2_zfmisc_1 k15_modelc_2 (u1_modelc_2 \\
& \quad \quad (k42_modelc_2 k43_modelc_2 k46_modelc_2))))))
\end{aligned} \tag{7}$$

Assume the following.

$$(\neg v1_xboole_0 k46_modelc_2) \wedge (m1_subset_1 k46_modelc_2 (k1_zfmisc_1 (k30_modelc_1 (k25_modelc_2 k43_modelc_2)))) \tag{8}$$

Assume the following.

$$\neg v1_xboole_0 k43_modelc_2 \tag{9}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k30_modelc_1 (k25_modelc_2 X0)))))) \Rightarrow \\ & (l1_modelc_2 (k42_modelc_2 X0 X1)) \end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 \\ & X1 (k25_modelc_2 X0)) \wedge (v7_ordinal1 X2))) \Rightarrow (m1_subset_1 (k29_modelc_2 \\ & X0 X1 X2) (k25_modelc_2 X0)) \end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v10_modelc_2 \\ & X0) \wedge (l1_modelc_2 X0))) \wedge (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k15_modelc_2 \\ & (u1_modelc_2 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k15_modelc_2 (u1_modelc_2 X0)))))) \wedge ((v1_modelc_2 X2) \wedge (m1_finseq_1 \\ & X2 k5_numbers)))) \Rightarrow (m1_subset_1 (k21_modelc_2 X0 X1 X2) (u1_struct_0 \\ & X0)) \end{aligned} \tag{12}$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (k25_modelc_2 k43_modelc_2)) \Rightarrow (\forall X1. \\ & ((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow ((r7_modelc_2 \\ & X0 X1) \Leftrightarrow (r6_modelc_2 k43_modelc_2 k46_modelc_2 X0 (k21_modelc_2 \\ & (k42_modelc_2 k43_modelc_2 k46_modelc_2) k47_modelc_2 X1)))) \end{aligned} \tag{13}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\ & \forall X1. ((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\ & \forall X2. (m1_subset_1 X2 (k25_modelc_2 k43_modelc_2)) \Rightarrow ((r7_modelc_2 \\ & X2 (k7_modelc_2 X0 X1)) \Leftrightarrow (\exists X3. (v7_ordinal1 X3) \wedge ((\forall X4. \\ & (v7_ordinal1 X4) \Rightarrow ((\neg r1_xxreal_0 X3 X4) \Rightarrow (r7_modelc_2 (k29_modelc_2 \\ & k43_modelc_2 X2 X4) X0)))) \wedge (r7_modelc_2 (k29_modelc_2 k43_modelc_2 \\ & X2 X3) X1)))))) \end{aligned}$$