

t65_modelc_2

(TMP9jFsd6dDLaQ82sMs74NhhPGS2LSgqVVY)

October 27, 2020

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 $k4_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r6_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned}
 & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k30_modelc_1 (k25_modelc_2 X0)))))) \Rightarrow \\
 & (\forall X2. (m1_subset_1 X2 (k25_modelc_2 X0)) \Rightarrow (\forall X3. (\\
 & m1_subset_1 X3 (u1_struct_0 (k42_modelc_2 X0 X1)))) \Rightarrow (\forall X4. \\
 & (m1_subset_1 X4 (u1_struct_0 (k42_modelc_2 X0 X1)))) \Rightarrow ((r6_modelc_2 \\
 & X0 X1 X2 (k2_lattices (k42_modelc_2 X0 X1) X3 X4)) \Leftrightarrow ((r6_modelc_2 \\
 & X0 X1 X2 X3) \wedge (r6_modelc_2 X0 X1 X2 X4))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
 & \forall X1. ((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
 & \forall X2. ((\neg v2_struct_0 X2) \wedge ((v10_modelc_2 X2) \wedge (l1_modelc_2 \\
 & X2))) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k15_modelc_2 \\
 & (u1_modelc_2 X2)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & k15_modelc_2 (u1_modelc_2 X2)))))) \Rightarrow (k21_modelc_2 X2 X3 (k4_modelc_2 \\
 & X0 X1) = k2_lattices X2 (k21_modelc_2 X2 X3 X0) (k21_modelc_2 X2 X3 \\
 & X1))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_modelc_2 X0)\wedge(m1_finseq_1 X0 k5_numbers))\wedge((v1_modelc_2 X1)\wedge(m1_finseq_1 X1 k5_numbers)))\Rightarrow(v1_modelc_2 (k4_modelc_2 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k30_modelc_1 (k25_modelc_2 X0))))))\Rightarrow((\neg v2_struct_0 (k42_modelc_2 X0 X1))\wedge((v9_modelc_2 (k42_modelc_2 X0 X1))\wedge(v10_modelc_2 (k42_modelc_2 X0 X1)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_finseq_1 X0 k5_numbers)\wedge(m1_finseq_1 X1 k5_numbers))\Rightarrow(m2_finseq_1 (k4_modelc_2 X0 X1) k5_numbers) \quad (6)$$

Assume the following.

$$(v1_funct_1 k47_modelc_2)\wedge((v1_funct_2 k47_modelc_2 k15_modelc_2 (u1_modelc_2 (k42_modelc_2 k43_modelc_2 k46_modelc_2)))\wedge(m1_subset_1 k47_modelc_2 (k1_zfmisc_1 (k2_zfmisc_1 k15_modelc_2 (u1_modelc_2 (k42_modelc_2 k43_modelc_2 k46_modelc_2)))))) \quad (7)$$

Assume the following.

$$(\neg v1_xboole_0 k46_modelc_2)\wedge(m1_subset_1 k46_modelc_2 (k1_zfmisc_1 (k30_modelc_1 (k25_modelc_2 k43_modelc_2)))) \quad (8)$$

Assume the following.

$$\neg v1_xboole_0 k43_modelc_2 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k30_modelc_1 (k25_modelc_2 X0))))))\Rightarrow(l1_modelc_2 (k42_modelc_2 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v10_modelc_2 X0)\wedge(l1_modelc_2 X0)))\wedge(((v1_funct_1 X1)\wedge((v1_funct_2 X1 k15_modelc_2 (u1_modelc_2 X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k15_modelc_2 (u1_modelc_2 X0))))))\wedge((v1_modelc_2 X2)\wedge(m1_finseq_1 X2 k5_numbers))))\Rightarrow(m1_subset_1 (k21_modelc_2 X0 X1 X2) (u1_struct_0 X0)) \quad (11)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k25_modelc_2 k43_modelc_2)) \Rightarrow (\forall X1. \\
& ((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow ((r7_modelc_2 \\
& X0 X1) \Leftrightarrow (r6_modelc_2 k43_modelc_2 k46_modelc_2 X0 (k21_modelc_2 \\
& (k42_modelc_2 k43_modelc_2 k46_modelc_2) k47_modelc_2 X1))))
\end{aligned} \tag{12}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \forall X2.(m1_subset_1 X2 (k25_modelc_2 k43_modelc_2)) \Rightarrow ((r7_modelc_2 \\
& X2 (k4_modelc_2 X0 X1)) \Leftrightarrow ((r7_modelc_2 X2 X0) \wedge (r7_modelc_2 X2 X1))))
\end{aligned}$$