

t69_modelc_2 (TMK- SAwBA7a9NY2pNVahwc6VuSYAnSJV4Ur9)

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 $k8_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k29_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_modelc_2 : \iota \Rightarrow \iota$ 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 $k24_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k30_modelc_1 (k25_modelc_2 X0)))))) \Rightarrow \\
& (\forall X2. (m1_subset_1 X2 (k25_modelc_2 X0)) \Rightarrow (\forall X3. (\\
& m1_subset_1 X3 (u1_struct_0 (k42_modelc_2 X0 X1)))) \Rightarrow (\forall X4. \\
& (m1_subset_1 X4 (u1_struct_0 (k42_modelc_2 X0 X1)))) \Rightarrow ((r6_modelc_2 \\
& X0 X1 X2 (k24_modelc_2 (k42_modelc_2 X0 X1) X3 X4)) \Leftrightarrow (\forall X5. \\
& (v7_ordinal1 X5) \Rightarrow ((\forall X6. (v7_ordinal1 X6) \Rightarrow ((\neg r1_xxreal_0 \\
& X5 X6) \Rightarrow (r6_modelc_2 X0 X1 (k29_modelc_2 X0 X2 X6) (k3_robbins1 (\\
& k42_modelc_2 X0 X1) X3)))) \Rightarrow (r6_modelc_2 X0 X1 (k29_modelc_2 X0 \\
& X2 X5) X4)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \quad \quad \forall X2.((\neg v2_struct_0 X2) \wedge ((v10_modelc_2 X2) \wedge (l1_modelc_2 \\
& \quad \quad X2))) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k15_modelc_2 \\
& \quad \quad (u1_modelc_2 X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad \quad k15_modelc_2 (u1_modelc_2 X2)))))) \Rightarrow (k21_modelc_2 X2 X3 (k8_modelc_2 \\
& \quad \quad X0 X1) = k24_modelc_2 X2 (k21_modelc_2 X2 X3 X0) (k21_modelc_2 X2 \\
& \quad \quad \quad X3 X1))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad \forall X1.((\neg v2_struct_0 X1) \wedge ((v10_modelc_2 X1) \wedge (l1_modelc_2 \\
& \quad \quad X1))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k15_modelc_2 \\
& \quad \quad (u1_modelc_2 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad \quad k15_modelc_2 (u1_modelc_2 X1)))))) \Rightarrow (k21_modelc_2 X1 X2 (k3_modelc_2 \\
& \quad \quad X0) = k3_robbins1 X1 (k21_modelc_2 X1 X2 X0))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((v1_modelc_2 X0) \wedge (m1_finseq_1 X0 k5_numbers)) \wedge \\
& \quad ((v1_modelc_2 X1) \wedge (m1_finseq_1 X1 k5_numbers))) \Rightarrow (v1_modelc_2 \\
& \quad \quad (k8_modelc_2 X0 X1))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0. ((v1_modelc_2 X0) \wedge (m1_finseq_1 X0 k5_numbers)) \Rightarrow (v1_modelc_2 (k3_modelc_2 X0)) \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& \quad (m1_subset_1 X1 (k1_zfmisc_1 (k30_modelc_1 (k25_modelc_2 X0)))))) \Rightarrow \\
& \quad ((\neg v2_struct_0 (k42_modelc_2 X0 X1)) \wedge ((v9_modelc_2 (k42_modelc_2 \\
& \quad \quad X0 X1)) \wedge (v10_modelc_2 (k42_modelc_2 X0 X1))))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0. \forall X1. ((m1_finseq_1 X0 k5_numbers) \wedge (m1_finseq_1 X1 k5_numbers)) \Rightarrow (m2_finseq_1 (k8_modelc_2 X0 X1) k5_numbers) \tag{8}$$

Assume the following.

$$(v1_funct_1\ k47_modelc_2) \wedge ((v1_funct_2\ k47_modelc_2\ k15_modelc_2\ (u1_modelc_2\ (k42_modelc_2\ k43_modelc_2\ k46_modelc_2))) \wedge (m1_subset_1\ k47_modelc_2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k15_modelc_2\ (u1_modelc_2\ (k42_modelc_2\ k43_modelc_2\ k46_modelc_2)))))) \quad (9)$$

Assume the following.

$$(\neg v1_xboole_0\ k46_modelc_2) \wedge (m1_subset_1\ k46_modelc_2\ (k1_zfmisc_1\ (k30_modelc_1\ (k25_modelc_2\ k43_modelc_2)))) \quad (10)$$

Assume the following.

$$\neg v1_xboole_0\ k43_modelc_2 \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0\ X0) \wedge ((\neg v1_xboole_0\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k30_modelc_1\ (k25_modelc_2\ X0)))))) \Rightarrow (l1_modelc_2\ (k42_modelc_2\ X0\ X1)) \quad (12)$$

Assume the following.

$$\forall X0.(m1_finseq_1\ X0\ k5_numbers) \Rightarrow (m2_finseq_1\ (k3_modelc_2\ X0)\ k5_numbers) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0) \wedge ((m1_subset_1\ X1\ (k25_modelc_2\ X0)) \wedge (v7_ordinal1\ X2))) \Rightarrow (m1_subset_1\ (k29_modelc_2\ X0\ X1\ X2)\ (k25_modelc_2\ X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0\ X0) \wedge ((v10_modelc_2\ X0) \wedge (l1_modelc_2\ X0))) \wedge (((v1_funct_1\ X1) \wedge ((v1_funct_2\ X1\ k15_modelc_2\ (u1_modelc_2\ X0)) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k15_modelc_2\ (u1_modelc_2\ X0)))))) \wedge ((v1_modelc_2\ X2) \wedge (m1_finseq_1\ X2\ k5_numbers)))) \Rightarrow (m1_subset_1\ (k21_modelc_2\ X0\ X1\ X2)\ (u1_struct_0\ X0)) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k25_modelc_2\ k43_modelc_2)) \Rightarrow (\forall X1.((v1_modelc_2\ X1) \wedge (m2_finseq_1\ X1\ k5_numbers)) \Rightarrow ((r7_modelc_2\ X0\ X1) \Leftrightarrow (r6_modelc_2\ k43_modelc_2\ k46_modelc_2\ X0\ (k21_modelc_2\ (k42_modelc_2\ k43_modelc_2\ k46_modelc_2)\ k47_modelc_2\ X1)))) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\ & \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\ & \quad \forall X2.(m1_subset_1 X2 (k25_modelc_2 k43_modelc_2)) \Rightarrow ((r7_modelc_2 \\ & \quad \quad X2 (k8_modelc_2 X0 X1)) \Leftrightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow ((\forall X4. \\ & \quad (v7_ordinal1 X4) \Rightarrow ((\neg r1_xxreal_0 X3 X4) \Rightarrow (r7_modelc_2 (k29_modelc_2 \\ & \quad k43_modelc_2 X2 X4) (k3_modelc_2 X0)))) \Rightarrow (r7_modelc_2 (k29_modelc_2 \\ & \quad \quad k43_modelc_2 X2 X3) X1)))))) \end{aligned}$$