

t52_modelc_1

(TMFA76n7U9gFsqEvAg5aLXAPW7Lt5ypwjwS)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k30_modelc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k48_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k61_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k51_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k50_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k58_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k28_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v6_cohsp_1 : \iota \Rightarrow o$ be given. Let $k53_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k52_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k60_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k59_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k54_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_partfun1 X1 X0) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (\forall X2. \\
 & ((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k30_modelc_1 \\
 & X0)))) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
 & X0 X1 X2)))) \Rightarrow (\forall X4. (m1_subset_1 X4 (k1_zfmisc_1 X0) \Rightarrow (k3_funct_2 \\
 & (k1_zfmisc_1 X0) (k1_zfmisc_1 X0) (k58_modelc_1 X0 X1 X2 X3) X4 = \\
 & k9_subset_1 X0 (k51_modelc_1 X0 X1 X2 X3) (k50_modelc_1 X0 X1 X4))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_partfun1 X1 X0) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (\forall X2. \\
& ((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k30_modelc_1 \\
& X0)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2))) \Rightarrow ((k51_modelc_1 X0 X1 X2 (k3_robbins1 (k48_modelc_1 \\
& X0 X1 X2) X3) = k6_subset_1 X0 (k51_modelc_1 X0 X1 X2 X3)) \wedge ((k51_modelc_1 \\
& X0 X1 X2 (k2_lattices (k48_modelc_1 X0 X1 X2) X3 X4) = k9_subset_1 \\
& X0 (k51_modelc_1 X0 X1 X2 X3) (k51_modelc_1 X0 X1 X2 X4)) \wedge (k51_modelc_1 \\
& X0 X1 X2 (k28_modelc_1 (k48_modelc_1 X0 X1 X2) X3 X4) = k4_subset_1 \\
& X0 (k51_modelc_1 X0 X1 X2 X3) (k51_modelc_1 X0 X1 X2 X4))))))))) \\
& \tag{2}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\
& X0) \wedge (((v1_partfun1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X0)))) \wedge (((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (\\
& k30_modelc_1 X0)))) \wedge ((m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2))) \wedge (m1_subset_1 X4 (u1_struct_0 (k48_modelc_1 X0 X1 X2)))))) \Rightarrow \\
& ((v1_funct_1 (k61_modelc_1 X0 X1 X2 X3 X4)) \wedge (v1_funct_2 (k61_modelc_1 \\
& X0 X1 X2 X3 X4) (k1_zfmisc_1 X0) (k1_zfmisc_1 X0)) \wedge (v6_cohsp_1 \\
& (k61_modelc_1 X0 X1 X2 X3 X4)) \wedge (m1_subset_1 (k61_modelc_1 X0 X1 \\
& X2 X3 X4) (k1_zfmisc_1 (k2_zfmisc_1 (k1_zfmisc_1 X0) (k1_zfmisc_1 \\
& X0))))))))) \\
& \tag{3}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\
& (((v1_partfun1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X0)))) \wedge (((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (\\
& k30_modelc_1 X0)))) \wedge (m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2)))))) \Rightarrow ((v1_funct_1 (k58_modelc_1 X0 X1 X2 X3)) \wedge ((v1_funct_2 \\
& (k58_modelc_1 X0 X1 X2 X3) (k1_zfmisc_1 X0) (k1_zfmisc_1 X0)) \wedge (\\
& v6_cohsp_1 (k58_modelc_1 X0 X1 X2 X3)) \wedge (m1_subset_1 (k58_modelc_1 \\
& X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 (k1_zfmisc_1 X0) (k1_zfmisc_1 \\
& X0))))))))) \\
& \tag{4}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\
& X0)\wedge(((v1_partfun1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X0))))\wedge(((\neg v1_xboole_0 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (\\
& k30_modelc_1 X0))))\wedge((m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2)))\wedge(m1_subset_1 X4 (u1_struct_0 (k48_modelc_1 X0 X1 X2))))))\Rightarrow \\
& (m1_subset_1 (k53_modelc_1 X0 X1 X2 X3 X4) (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2)))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\
& (((v1_partfun1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X0))))\wedge(((\neg v1_xboole_0 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (\\
& k30_modelc_1 X0))))\wedge(m1_subset_1 X3 (k1_zfmisc_1 X0))))\Rightarrow(m1_subset_1 \\
& (k52_modelc_1 X0 X1 X2 X3) (u1_struct_0 (k48_modelc_1 X0 X1 X2)))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_partfun1 X1 X0)\wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))\Rightarrow(\forall X2. \\
& ((\neg v1_xboole_0 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k30_modelc_1 \\
& X0))))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2)))\Rightarrow(\forall X4.(m1_subset_1 X4 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2)))\Rightarrow(\forall X5.((v1_funct_1 X5)\wedge((v1_funct_2 X5 (k1_zfmisc_1 \\
& X0) (k1_zfmisc_1 X0))\wedge((v6_cohsp_1 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k1_zfmisc_1 X0) (k1_zfmisc_1 X0))))))\Rightarrow((X5 = k61_modelc_1 \\
& X0 X1 X2 X3 X4)\Leftrightarrow(\forall X6.(m1_subset_1 X6 (k1_zfmisc_1 X0))\Rightarrow(\\
& k3_funct_2 (k1_zfmisc_1 X0) (k1_zfmisc_1 X0) X5 X6 = k60_modelc_1 \\
& X0 X1 X2 X3 X4 X6))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_partfun1 X1 X0)\wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))\Rightarrow(\forall X2. \\
& ((\neg v1_xboole_0 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k30_modelc_1 \\
& X0))))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2)))\Rightarrow(\forall X4.(m1_subset_1 X4 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2)))\Rightarrow(\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 X0))\Rightarrow(k60_modelc_1 \\
& X0 X1 X2 X3 X4 X5 = k51_modelc_1 X0 X1 X2 (k59_modelc_1 X0 X1 X2 X3 X4 (\\
& k52_modelc_1 X0 X1 X2 X5))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_partfun1 X1 X0) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (\forall X2. \\
& ((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k30_modelc_1 \\
& X0)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2))) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2))) \Rightarrow (k59_modelc_1 X0 X1 X2 X3 X4 X5 = k28_modelc_1 (k48_modelc_1 \\
& X0 X1 X2) X4 (k53_modelc_1 X0 X1 X2 X3 X5))))))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_partfun1 X1 X0) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (\forall X2. \\
& ((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k30_modelc_1 \\
& X0)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2))) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (k1_zfmisc_1 \\
& X0) (k1_zfmisc_1 X0)) \wedge ((v6_cohsp_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
& k2_zfmisc_1 (k1_zfmisc_1 X0) (k1_zfmisc_1 X0)))))) \Rightarrow ((X4 = k58_modelc_1 \\
& X0 X1 X2 X3) \Leftrightarrow (\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 X0)) \Rightarrow (k3_funct_2 \\
& (k1_zfmisc_1 X0) (k1_zfmisc_1 X0) X4 X5 = k54_modelc_1 X0 X1 X2 X3 \\
& X5))))))
\end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_partfun1 X1 X0) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (\forall X2. \\
& ((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k30_modelc_1 \\
& X0)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2))) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 X0)) \Rightarrow (k54_modelc_1 \\
& X0 X1 X2 X3 X4 = k51_modelc_1 X0 X1 X2 (k53_modelc_1 X0 X1 X2 X3 (k52_modelc_1 \\
& X0 X1 X2 X4))))))
\end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_partfun1 X1 X0) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (\forall X2. \\
& ((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k30_modelc_1 \\
& X0)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (k48_modelc_1 \\
& X0 X1 X2))) \Rightarrow (k53_modelc_1 X0 X1 X2 X3 X4 = k2_lattices (k48_modelc_1 \\
& X0 X1 X2) X3 (k25_modelc_1 (k48_modelc_1 X0 X1 X2) X4))))))
\end{aligned} \tag{12}$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_partfun1 X1 X0) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (\forall X2. \\ & ((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k30_modelc_1 \\ & X0)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k48_modelc_1 \\ & X0 X1 X2))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (k48_modelc_1 \\ & X0 X1 X2))) \Rightarrow (\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 X0)) \Rightarrow (k3_funct_2 \\ & (k1_zfmisc_1 X0) (k1_zfmisc_1 X0) (k61_modelc_1 X0 X1 X2 X3 X4) X5 = \\ & k4_subset_1 X0 (k51_modelc_1 X0 X1 X2 X4) (k9_subset_1 X0 (k51_modelc_1 \\ & X0 X1 X2 X3) (k50_modelc_1 X0 X1 X5)))))) \end{aligned}$$