

l102_modelc_2
(TMNViaAoVU4RmfWfrp2kMuqsD8rkuCJZ2hi)

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Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_modelc_2 : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r4_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v2_modelc_2 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_modelc_2 : \iota \Rightarrow o$ be given. Let $u1_robbins1 : \iota \Rightarrow \iota$ be given. Let $k10_modelc_2 : \iota \Rightarrow \iota$ be given. Let $v4_modelc_2 : \iota \Rightarrow o$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_lattices : \iota \Rightarrow \iota$ be given. Let $k11_modelc_2 : \iota \Rightarrow \iota$ be given. Let $k12_modelc_2 : \iota \Rightarrow \iota$ be given. Let $v5_modelc_2 : \iota \Rightarrow o$ be given. Let $u2_lattices : \iota \Rightarrow \iota$ be given. Let $v6_modelc_2 : \iota \Rightarrow o$ be given. Let $u2_modelc_2 : \iota \Rightarrow \iota$ be given. Let $v7_modelc_2 : \iota \Rightarrow o$ be given. Let $u3_modelc_2 : \iota \Rightarrow \iota$ be given. Let $v8_modelc_2 : \iota \Rightarrow o$ be given. Let $u4_modelc_2 : \iota \Rightarrow \iota$ be given. Assume the

following.

$$\begin{aligned}
& \forall X0.(l1_modelc_2 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((\\
& \quad v1_funct_2 X1 k15_modelc_2 (u1_modelc_2 X0)) \wedge (m1_subset_1 X1 \\
& \quad (k1_zfmisc_1 (k2_zfmisc_1 k15_modelc_2 (u1_modelc_2 X0)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k9_modelc_2 (u1_struct_0 \\
& \quad X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k9_modelc_2 (\\
& \quad \quad u1_struct_0 X0)))))) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow ((r5_modelc_2 \\
& X0 X1 X2 X3) \Leftrightarrow (\forall X4.((v1_modelc_2 X4) \wedge (m2_finseq_1 X4 k5_numbers)) \Rightarrow \\
& ((r1_xxreal_0 (k3_finseq_1 X4) X3) \Rightarrow (((v2_modelc_2 X4) \Rightarrow (k1_funct_1 \\
& X2 X4 = k1_funct_1 X1 X4)) \wedge (((v3_modelc_2 X4) \Rightarrow (k1_funct_1 X2 X4 = \\
& k1_funct_1 (u1_robbins1 X0) (k1_funct_1 X2 (k10_modelc_2 X4)))) \wedge \\
& (((v4_modelc_2 X4) \Rightarrow (k1_funct_1 X2 X4 = k1_binop_1 (u1_lattices \\
& X0) (k1_funct_1 X2 (k11_modelc_2 X4)) (k1_funct_1 X2 (k12_modelc_2 \\
& X4)))) \wedge (((v5_modelc_2 X4) \Rightarrow (k1_funct_1 X2 X4 = k1_binop_1 (u2_lattices \\
& X0) (k1_funct_1 X2 (k11_modelc_2 X4)) (k1_funct_1 X2 (k12_modelc_2 \\
& X4)))) \wedge (((v6_modelc_2 X4) \Rightarrow (k1_funct_1 X2 X4 = k1_funct_1 (u2_modelc_2 \\
& X0) (k1_funct_1 X2 (k10_modelc_2 X4)))) \wedge (((v7_modelc_2 X4) \Rightarrow (\\
& k1_funct_1 X2 X4 = k1_binop_1 (u3_modelc_2 X0) (k1_funct_1 X2 (k11_modelc_2 \\
& X4)) (k1_funct_1 X2 (k12_modelc_2 X4)))) \wedge ((v8_modelc_2 X4) \Rightarrow (\\
& k1_funct_1 X2 X4 = k1_binop_1 (u4_modelc_2 X0) (k1_funct_1 X2 (k11_modelc_2 \\
& X4)) (k1_funct_1 X2 (k12_modelc_2 X4))))))))))))))))) \\
& \tag{1}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_modelc_2 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((\\
& \quad v1_funct_2 X1 k15_modelc_2 (u1_modelc_2 X0)) \wedge (m1_subset_1 X1 \\
& \quad (k1_zfmisc_1 (k2_zfmisc_1 k15_modelc_2 (u1_modelc_2 X0)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k9_modelc_2 (u1_struct_0 \\
& \quad X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k9_modelc_2 (\\
& \quad \quad u1_struct_0 X0)))))) \Rightarrow ((r4_modelc_2 X0 X1 X2) \Leftrightarrow (\forall X3.((v1_modelc_2 \\
& X3) \wedge (m2_finseq_1 X3 k5_numbers)) \Rightarrow (((v2_modelc_2 X3) \Rightarrow (k1_funct_1 \\
& X2 X3 = k1_funct_1 X1 X3)) \wedge (((v3_modelc_2 X3) \Rightarrow (k1_funct_1 X2 X3 = \\
& k1_funct_1 (u1_robbins1 X0) (k1_funct_1 X2 (k10_modelc_2 X3)))) \wedge \\
& (((v4_modelc_2 X3) \Rightarrow (k1_funct_1 X2 X3 = k1_binop_1 (u1_lattices \\
& X0) (k1_funct_1 X2 (k11_modelc_2 X3)) (k1_funct_1 X2 (k12_modelc_2 \\
& X3)))) \wedge (((v5_modelc_2 X3) \Rightarrow (k1_funct_1 X2 X3 = k1_binop_1 (u2_lattices \\
& X0) (k1_funct_1 X2 (k11_modelc_2 X3)) (k1_funct_1 X2 (k12_modelc_2 \\
& X3)))) \wedge (((v6_modelc_2 X3) \Rightarrow (k1_funct_1 X2 X3 = k1_funct_1 (u2_modelc_2 \\
& X0) (k1_funct_1 X2 (k10_modelc_2 X3)))) \wedge (((v7_modelc_2 X3) \Rightarrow (\\
& k1_funct_1 X2 X3 = k1_binop_1 (u3_modelc_2 X0) (k1_funct_1 X2 (k11_modelc_2 \\
& X3)) (k1_funct_1 X2 (k12_modelc_2 X3)))) \wedge ((v8_modelc_2 X3) \Rightarrow (\\
& k1_funct_1 X2 X3 = k1_binop_1 (u4_modelc_2 X0) (k1_funct_1 X2 (k11_modelc_2 \\
& X3)) (k1_funct_1 X2 (k12_modelc_2 X3))))))))))))))))) \\
& \tag{2}
\end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ & ((v10_modelc_2\ X1) \wedge (l1_modelc_2\ X1))) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v1_funct_2\ X2\ k15_modelc_2\ (u1_modelc_2\ X1)) \wedge (m1_subset_1 \\ & X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k15_modelc_2\ (u1_modelc_2\ X1)))))) \Rightarrow \\ & (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ k9_modelc_2\ (u1_struct_0 \\ & X1)) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ k9_modelc_2\ (\\ & u1_struct_0\ X1)))))) \Rightarrow ((r4_modelc_2\ X1\ X2\ X3) \Rightarrow (r5_modelc_2\ X1 \\ & X2\ X3\ X0)))))) \end{aligned}$$