

l58_modelc_1
(TMRaGiJRWzktXzzyLVa7P5wrRE1sH5ZVASC)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_modelc_1 : \iota \Rightarrow o$ be given. Let $l2_modelc_1 : \iota \Rightarrow o$ 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 $k18_modelc_1 : \iota$ be given. Let $u3_modelc_1 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_modelc_1 : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_modelc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_modelc_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v2_modelc_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_modelc_1 : \iota \Rightarrow o$ be given. Let $u1_robbins1 : \iota \Rightarrow \iota$ be given. Let $k14_modelc_1 : \iota \Rightarrow \iota$ be given. Let $v4_modelc_1 : \iota \Rightarrow o$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_lattices : \iota \Rightarrow \iota$ be given. Let $k15_modelc_1 : \iota \Rightarrow \iota$ be given. Let $k16_modelc_1 : \iota \Rightarrow \iota$ be given. Let $v5_modelc_1 : \iota \Rightarrow o$ be given. Let $u4_modelc_1 : \iota \Rightarrow \iota$ be given. Let $v6_modelc_1 : \iota \Rightarrow o$ be given. Let $u5_modelc_1 : \iota \Rightarrow \iota$ be given. Let $v7_modelc_1 : \iota \Rightarrow o$ be given.

Let $u6_modelc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(l2_modelc_1 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((\\
& \quad v1_funct_2 X1 k18_modelc_1 (u3_modelc_1 X0)) \wedge (m1_subset_1 X1 \\
& \quad (k1_zfmisc_1 (k2_zfmisc_1 k18_modelc_1 (u3_modelc_1 X0)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k12_modelc_1 (u1_struct_0 \\
& \quad X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k12_modelc_1 \\
& \quad (u1_struct_0 X0)))))) \Rightarrow (\forall X3.(m1_subset_1 X3 k5_numbers) \Rightarrow \\
& ((r2_modelc_1 X0 X1 X2 X3) \Leftrightarrow (\forall X4.((v1_modelc_1 X4) \wedge (m2_finseq_1 \\
& \quad X4 k5_numbers) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 X4) X3) \Rightarrow ((v2_modelc_1 \\
& \quad X4) \Rightarrow (k1_funct_1 X2 X4 = k1_funct_1 X1 X4)) \wedge (((v3_modelc_1 X4) \Rightarrow \\
& \quad (k1_funct_1 X2 X4 = k1_funct_1 (u1_robbins1 X0) (k1_funct_1 X2 (\\
& \quad k14_modelc_1 X4)))) \wedge (((v4_modelc_1 X4) \Rightarrow (k1_funct_1 X2 X4 = k1_binop_1 \\
& \quad (u1_lattices X0) (k1_funct_1 X2 (k15_modelc_1 X4)) (k1_funct_1 \\
& \quad X2 (k16_modelc_1 X4)))) \wedge (((v5_modelc_1 X4) \Rightarrow (k1_funct_1 X2 X4 = \\
& \quad k1_funct_1 (u4_modelc_1 X0) (k1_funct_1 X2 (k14_modelc_1 X4)))) \wedge \\
& \quad (((v6_modelc_1 X4) \Rightarrow (k1_funct_1 X2 X4 = k1_funct_1 (u5_modelc_1 \\
& \quad X0) (k1_funct_1 X2 (k14_modelc_1 X4)))) \wedge ((v7_modelc_1 X4) \Rightarrow (k1_funct_1 \\
& \quad X2 X4 = k1_binop_1 (u6_modelc_1 X0) (k1_funct_1 X2 (k15_modelc_1 \\
& \quad X4)) (k1_funct_1 X2 (k16_modelc_1 X4))))))))))))) \Rightarrow (1)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l2_modelc_1 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((\\
& \quad v1_funct_2 X1 k18_modelc_1 (u3_modelc_1 X0)) \wedge (m1_subset_1 X1 \\
& \quad (k1_zfmisc_1 (k2_zfmisc_1 k18_modelc_1 (u3_modelc_1 X0)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k12_modelc_1 (u1_struct_0 \\
& \quad X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k12_modelc_1 \\
& \quad (u1_struct_0 X0)))))) \Rightarrow ((r1_modelc_1 X0 X1 X2) \Leftrightarrow (\forall X3.((\\
& \quad v1_modelc_1 X3) \wedge (m2_finseq_1 X3 k5_numbers) \Rightarrow (((v2_modelc_1 \\
& \quad X3) \Rightarrow (k1_funct_1 X2 X3 = k1_funct_1 X1 X3)) \wedge (((v3_modelc_1 X3) \Rightarrow \\
& \quad (k1_funct_1 X2 X3 = k1_funct_1 (u1_robbins1 X0) (k1_funct_1 X2 (\\
& \quad k14_modelc_1 X3)))) \wedge (((v4_modelc_1 X3) \Rightarrow (k1_funct_1 X2 X3 = k1_binop_1 \\
& \quad (u1_lattices X0) (k1_funct_1 X2 (k15_modelc_1 X3)) (k1_funct_1 \\
& \quad X2 (k16_modelc_1 X3)))) \wedge (((v5_modelc_1 X3) \Rightarrow (k1_funct_1 X2 X3 = \\
& \quad k1_funct_1 (u4_modelc_1 X0) (k1_funct_1 X2 (k14_modelc_1 X3)))) \wedge \\
& \quad (((v6_modelc_1 X3) \Rightarrow (k1_funct_1 X2 X3 = k1_funct_1 (u5_modelc_1 \\
& \quad X0) (k1_funct_1 X2 (k14_modelc_1 X3)))) \wedge ((v7_modelc_1 X3) \Rightarrow (k1_funct_1 \\
& \quad X2 X3 = k1_binop_1 (u6_modelc_1 X0) (k1_funct_1 X2 (k15_modelc_1 \\
& \quad X3)) (k1_funct_1 X2 (k16_modelc_1 X3))))))))))))) \Rightarrow (2)
\end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((\neg v2_struct_0 \\ & X1) \wedge ((v10_modelc_1 X1) \wedge (l2_modelc_1 X1))) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 k18_modelc_1 (u3_modelc_1 X1)) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k18_modelc_1 (u3_modelc_1 X1)))))) \Rightarrow \\ & (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k12_modelc_1 (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k12_modelc_1 \\ & (u1_struct_0 X1)))))) \Rightarrow ((r1_modelc_1 X1 X2 X3) \Rightarrow (r2_modelc_1 X1 \\ & X2 X3 X0)))))) \end{aligned}$$