

l105_modelc_2
(TMGXfb4dDs6bwsoo2sAGDf3VcymauwU7BpE)

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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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r5_modelc.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_modelc.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ be given. Let $v1_finseq.1 : \iota \Rightarrow o$ be given. Let $k3_finseq.1 : \iota \Rightarrow \iota$ be given. Let $k1_card.1 : \iota \Rightarrow \iota$ be given. Let $v1_finset.1 : \iota \Rightarrow o$ be given. Let $v1_card.1 : \iota \Rightarrow o$ be given. Let $v1_modelc.2 : \iota \Rightarrow o$ be given. Let $r1_xxreal.0 : \iota \Rightarrow \iota \Rightarrow o$ 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. Let $v1_xxreal.0 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m2_finseq.1 X1 X0) \Leftrightarrow (m1_finseq.1 X1 X0) \quad (1)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat.1 X0) \wedge ((v1_funct.1 X0) \wedge (v1_finseq.1 X0))) \Rightarrow (k3_finseq.1 X0 = k1_card.1 X0) \quad (3)$$

Assume the following.

$$\forall X0. (v1_finset.1 X0) \Rightarrow ((v1_finset.1 (k1_card.1 X0)) \wedge (v1_card.1 (k1_card.1 X0))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (5)$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_modelc_2 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge((\\ & v1_funct_2 X1 k15_modelc_2 (u1_modelc_2 X0))\wedge(m1_subset_1 X1 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k15_modelc_2 (u1_modelc_2 X0))))))\Rightarrow \\ & (\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 k9_modelc_2 (u1_struct_0 \\ & X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k9_modelc_2 (\\ & u1_struct_0 X0))))))\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow((r5_modelc_2 \\ & X0 X1 X2 X3)\Leftrightarrow(\forall X4.((v1_modelc_2 X4)\wedge(m2_finseq_1 X4 k5_numbers))\Rightarrow \\ & ((r1_xreal_0 (k3_finseq_1 X4) X3)\Rightarrow(((v2_modelc_2 X4)\Rightarrow(k1_funct_1 \\ & X2 X4 = k1_funct_1 X1 X4))\wedge(((v3_modelc_2 X4)\Rightarrow(k1_funct_1 X2 X4 = \\ & k1_funct_1 (u1_robbins1 X0) (k1_funct_1 X2 (k10_modelc_2 X4))))\wedge \\ & (((v4_modelc_2 X4)\Rightarrow(k1_funct_1 X2 X4 = k1_binop_1 (u1_lattices \\ & X0) (k1_funct_1 X2 (k11_modelc_2 X4)) (k1_funct_1 X2 (k12_modelc_2 \\ & X4))))\wedge(((v5_modelc_2 X4)\Rightarrow(k1_funct_1 X2 X4 = k1_binop_1 (u2_lattices \\ & X0) (k1_funct_1 X2 (k11_modelc_2 X4)) (k1_funct_1 X2 (k12_modelc_2 \\ & X4))))\wedge(((v6_modelc_2 X4)\Rightarrow(k1_funct_1 X2 X4 = k1_funct_1 (u2_modelc_2 \\ & X0) (k1_funct_1 X2 (k10_modelc_2 X4))))\wedge(((v7_modelc_2 X4)\Rightarrow(\\ & k1_funct_1 X2 X4 = k1_binop_1 (u3_modelc_2 X0) (k1_funct_1 X2 (k11_modelc_2 \\ & X4)) (k1_funct_1 X2 (k12_modelc_2 X4))))\wedge(((v8_modelc_2 X4)\Rightarrow(\\ & k1_funct_1 X2 X4 = k1_binop_1 (u4_modelc_2 X0) (k1_funct_1 X2 (k11_modelc_2 \\ & X4)) (k1_funct_1 X2 (k12_modelc_2 X4)))))))))))))) \quad (7) \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_modelc_2 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((\\
& v1_funct_2 X1 k15_modelc_2 (u1_modelc_2 X0)) \wedge (m1_subset_1 X1 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k15_modelc_2 (u1_modelc_2 X0)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k9_modelc_2 (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k9_modelc_2 (\\
& u1_struct_0 X0)))))) \Rightarrow ((r4_modelc_2 X0 X1 X2) \Leftrightarrow (\forall X3.((v1_modelc_2 \\
& X3) \wedge (m2_finseq_1 X3 k5_numbers)) \Rightarrow (((v2_modelc_2 X3) \Rightarrow (k1_funct_1 \\
& X2 X3 = k1_funct_1 X1 X3)) \wedge ((v3_modelc_2 X3) \Rightarrow (k1_funct_1 X2 X3 = \\
& k1_funct_1 (u1_robbins1 X0) (k1_funct_1 X2 (k10_modelc_2 X3)))) \wedge \\
& (((v4_modelc_2 X3) \Rightarrow (k1_funct_1 X2 X3 = k1_binop_1 (u1_lattices \\
& X0) (k1_funct_1 X2 (k11_modelc_2 X3)) (k1_funct_1 X2 (k12_modelc_2 \\
& X3)))) \wedge ((v5_modelc_2 X3) \Rightarrow (k1_funct_1 X2 X3 = k1_binop_1 (u2_lattices \\
& X0) (k1_funct_1 X2 (k11_modelc_2 X3)) (k1_funct_1 X2 (k12_modelc_2 \\
& X3)))) \wedge (((v6_modelc_2 X3) \Rightarrow (k1_funct_1 X2 X3 = k1_funct_1 (u2_modelc_2 \\
& X0) (k1_funct_1 X2 (k10_modelc_2 X3)))) \wedge ((v7_modelc_2 X3) \Rightarrow (\\
& k1_funct_1 X2 X3 = k1_binop_1 (u3_modelc_2 X0) (k1_funct_1 X2 (k11_modelc_2 \\
& X3)) (k1_funct_1 X2 (k12_modelc_2 X3)))) \wedge ((v8_modelc_2 X3) \Rightarrow (\\
& k1_funct_1 X2 X3 = k1_binop_1 (u4_modelc_2 X0) (k1_funct_1 X2 (k11_modelc_2 \\
& X3)) (k1_funct_1 X2 (k12_modelc_2 X3)))))))))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (\\
(r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \tag{9}$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v1_finset_1 X0)) \Rightarrow (v7_ordinal1 X0) \tag{10}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xxreal_0 X0) \tag{11}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\
((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0))) \tag{12}$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \tag{13}$$

Theorem 1

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