

l101_modelc_2

(TMbgztoNXp8jCrMNRj7vXWY9KGpSDiehX8v)

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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 $r5_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ 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 $k4_ordinal1 : \iota$ 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 $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v2_modelc_2 : \iota \Rightarrow o$ 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.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\neg r1_xxreal_0 (k1_nat_1 X1 np_1) X0) \Leftrightarrow (r1_xxreal_0 X0 X1))) \quad (1)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v7_ordinal1 X0) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow (k1_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0. (v1_finset_1 X0) \Rightarrow ((v1_finset_1 (k1_card_1 X0)) \wedge (v1_card_1 (k1_card_1 X0))) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. ((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (v7_ordinal1 (k2_xcmplx_0 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (9)$$

Assume the following.

$$\forall X0. v1_card_1 (k1_card_1 X0) \quad (10)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_modelc_2 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((\\
& \quad v1_funct_2 X1 k15_modelc_2 (u1_modelc_2 X0)) \wedge (m1_subset_1 X1 \\
& \quad (k1_zfmisc_1 (k2_zfmisc_1 k15_modelc_2 (u1_modelc_2 X0)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k9_modelc_2 (u1_struct_0 \\
& \quad X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k9_modelc_2 (\\
& \quad \quad u1_struct_0 X0)))))) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow ((r5_modelc_2 \\
& X0 X1 X2 X3) \Leftrightarrow (\forall X4.((v1_modelc_2 X4) \wedge (m2_finseq_1 X4 k5_numbers)) \Rightarrow \\
& ((r1_xxreal_0 (k3_finseq_1 X4) X3) \Rightarrow ((v2_modelc_2 X4) \Rightarrow (k1_funct_1 \\
& X2 X4 = k1_funct_1 X1 X4)) \wedge ((v3_modelc_2 X4) \Rightarrow (k1_funct_1 X2 X4 = \\
& k1_funct_1 (u1_robbins1 X0) (k1_funct_1 X2 (k10_modelc_2 X4)))) \wedge \\
& (((v4_modelc_2 X4) \Rightarrow (k1_funct_1 X2 X4 = k1_binop_1 (u1_lattices \\
& X0) (k1_funct_1 X2 (k11_modelc_2 X4)) (k1_funct_1 X2 (k12_modelc_2 \\
& X4)))) \wedge ((v5_modelc_2 X4) \Rightarrow (k1_funct_1 X2 X4 = k1_binop_1 (u2_lattices \\
& X0) (k1_funct_1 X2 (k11_modelc_2 X4)) (k1_funct_1 X2 (k12_modelc_2 \\
& X4)))) \wedge ((v6_modelc_2 X4) \Rightarrow (k1_funct_1 X2 X4 = k1_funct_1 (u2_modelc_2 \\
& X0) (k1_funct_1 X2 (k10_modelc_2 X4)))) \wedge ((v7_modelc_2 X4) \Rightarrow (\\
& k1_funct_1 X2 X4 = k1_binop_1 (u3_modelc_2 X0) (k1_funct_1 X2 (k11_modelc_2 \\
& X4)) (k1_funct_1 X2 (k12_modelc_2 X4)))) \wedge ((v8_modelc_2 X4) \Rightarrow (\\
& k1_funct_1 X2 X4 = k1_binop_1 (u4_modelc_2 X0) (k1_funct_1 X2 (k11_modelc_2 \\
& X4)) (k1_funct_1 X2 (k12_modelc_2 X4))))))))))))) \\
& \hspace{15em} (11)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& k15_modelc_2 = ReplSep (toset (\lambda X0 : \iota.(v1_modelc_2 X0) \wedge (\\
& m2_finseq_1 X0 k5_numbers)) (\lambda X0 : \iota.v2_modelc_2 X0) (\lambda X0 : \\
& \quad \iota.X0) \\
& \hspace{15em} (12)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (\\
& \quad (r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \\
& \hspace{15em} (13)
\end{aligned}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \hspace{10em} (14)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v1_finset_1 X0)) \Rightarrow (v7_ordinal1 X0) \hspace{10em} (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xxreal_0 X0) \hspace{10em} (16)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\
& \quad ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0))) \\
& \hspace{15em} (17)
\end{aligned}$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (18)$$

Theorem 1

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow & (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v10_modelc_2 X1) \wedge (l1_modelc_2 X1))) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 k15_modelc_2 (u1_modelc_2 X1)) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k15_modelc_2 (u1_modelc_2 X1)))))) \Rightarrow \\ & (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k9_modelc_2 (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k9_modelc_2 (\\ & u1_struct_0 X1)))))) \Rightarrow ((r5_modelc_2 X1 X2 X3 (k1_nat_1 X0 np_1)) \Rightarrow \\ & (r5_modelc_2 X1 X2 X3 X0)))))) \end{aligned}$$