

t35_modelc.3
(TMQ8gvHFMYQEiaHGyPsmHwQ1jhAENxKPCJL)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ be given. Let $v1_funct.1 : \iota \Rightarrow o$ be given. Let $v1_finseq.1 : \iota \Rightarrow o$ 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 $r5_modelc.3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq.1 : \iota \Rightarrow \iota$ be given. Let $r4_modelc.3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_modelc.3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_nat.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_modelc.3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_modelc.3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_modelc.3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_modelc.3 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_modelc.2 X0) \wedge (m2_finseq.1 X0 k5_numbers)) \Rightarrow (\\ & \quad \forall X1.((v1_relat.1 X1) \wedge ((v1_funct.1 X1) \wedge (v1_finseq.1 X1))) \Rightarrow \\ & \quad ((r5_modelc.3 X0 X1) \Leftrightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\neg(r1_xxreal.0 \\ & \quad np_1 X2) \wedge ((\neg r1_xxreal.0 (k3_finseq.1 X1) X2) \wedge (\forall X3.((\\ & \quad v1_modelc.3 X3 X0) \wedge (l1_modelc.3 X3 X0)) \Rightarrow (\forall X4.((v1_modelc.3 \\ & \quad X4 X0) \wedge (l1_modelc.3 X4 X0)) \Rightarrow (\neg(X3 = k1_funct.1 X1 X2) \wedge ((X4 = k1_funct.1 \\ & \quad X1 (k1_nat.1 X2 np_1)) \wedge (r4_modelc.3 X0 X3 X4)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_modelc.2 X1) \wedge (m2_finseq.1 X1 k5_numbers)) \Rightarrow \\ & \quad (((v1_modelc.3 X0 X1) \wedge (l1_modelc.3 X0 X1)) \Rightarrow (k10_modelc.3 X0 \\ & \quad X1 = X0)) \wedge ((\neg(v1_modelc.3 X0 X1) \wedge (l1_modelc.3 X0 X1)) \Rightarrow (k10_modelc.3 \\ & \quad X0 X1 = g1_modelc.3 X1 (k7_modelc.3 X1) (k7_modelc.3 X1) (k7_modelc.3 \\ & \quad X1))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_relat.1 X1) \wedge ((\\ & \quad v1_funct.1 X1) \wedge (v1_finseq.1 X1))) \Rightarrow (\forall X2.((v1_modelc.2 \\ & \quad X2) \wedge (m2_finseq.1 X2 k5_numbers)) \Rightarrow (((r5_modelc.3 X2 X1) \wedge (r1_xxreal.0 \\ & \quad np_1 X0)) \Rightarrow ((r1_xxreal.0 (k3_finseq.1 X1) X0) \vee (r4_modelc.3 X2 \\ & \quad (k10_modelc.3 (k1_funct.1 X1 X0) X2) (k10_modelc.3 (k1_funct.1 \\ & \quad X1 (k1_nat.1 X0 np_1)) X2)))))) \end{aligned}$$