

t28_modelc_2

(TMbSazSRadqEVgJPDaoCzhZUwXpt1ajHY3g)

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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 $r1_modelc_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v8_modelc_2 : \iota \Rightarrow o$ be given. Let $k11_modelc_2 : \iota \Rightarrow \iota$ be given. Let $k12_modelc_2 : \iota \Rightarrow \iota$ be given. Let $v7_modelc_2 : \iota \Rightarrow o$ be given. Let $v5_modelc_2 : \iota \Rightarrow o$ be given. Let $v4_modelc_2 : \iota \Rightarrow o$ be given. Let $v6_modelc_2 : \iota \Rightarrow o$ be given. Let $k10_modelc_2 : \iota \Rightarrow \iota$ be given. Let $v3_modelc_2 : \iota \Rightarrow o$ be given. Let $v2_modelc_2 : \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_2 : \iota$ be given. Let $np_3 : \iota$ be given. Let $np_4 : \iota$ be given. Let $np_5 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\ & \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\ & (v8_modelc_2 X0) \Rightarrow ((r1_modelc_2 X1 X0) \Leftrightarrow ((X1 = k11_modelc_2 X0) \vee \\ & \quad (X1 = k12_modelc_2 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\ & \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\ & (v7_modelc_2 X0) \Rightarrow ((r1_modelc_2 X1 X0) \Leftrightarrow ((X1 = k11_modelc_2 X0) \vee \\ & \quad (X1 = k12_modelc_2 X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\ & \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\ & (v5_modelc_2 X0) \Rightarrow ((r1_modelc_2 X1 X0) \Leftrightarrow ((X1 = k11_modelc_2 X0) \vee \\ & \quad (X1 = k12_modelc_2 X0)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \quad (v4_modelc_2 X0) \Rightarrow ((r1_modelc_2 X1 X0) \Leftrightarrow ((X1 = k11_modelc_2 X0) \vee \\
& \quad \quad (X1 = k12_modelc_2 X0))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \quad (v6_modelc_2 X0) \Rightarrow ((r1_modelc_2 X1 X0) \Leftrightarrow (X1 = k10_modelc_2 X0))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \quad (v3_modelc_2 X0) \Rightarrow ((r1_modelc_2 X1 X0) \Leftrightarrow (X1 = k10_modelc_2 X0))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \quad \quad \neg(v2_modelc_2 X0) \wedge (r1_modelc_2 X1 X0))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad (\neg(\neg v4_modelc_2 X0) \wedge (\neg v5_modelc_2 X0) \wedge (\neg v7_modelc_2 X0) \wedge \\
& \quad (\neg v8_modelc_2 X0))) \Rightarrow ((k3_finseq_1 X0 = k2_nat_1 (k2_nat_1 np_1 \\
& \quad \quad (k3_finseq_1 (k11_modelc_2 X0))) (k3_finseq_1 (k12_modelc_2 \\
& \quad \quad X0))) \wedge ((\neg r1_xreal_0 (k3_finseq_1 X0) (k3_finseq_1 (k11_modelc_2 \\
& \quad \quad X0))) \wedge (\neg r1_xreal_0 (k3_finseq_1 X0) (k3_finseq_1 (k12_modelc_2 \\
& \quad \quad X0))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad ((v3_modelc_2 X0) \vee (v6_modelc_2 X0)) \Rightarrow ((k3_finseq_1 X0 = k2_nat_1 \\
& \quad \quad np_1 (k3_finseq_1 (k10_modelc_2 X0))) \wedge (\neg r1_xreal_0 (k3_finseq_1 \\
& \quad \quad X0) (k3_finseq_1 (k10_modelc_2 X0))))))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \neg(\neg(v2_modelc_2 X0) \wedge ((k1_funct_1 X0 np_1 \neq k6_numbers) \wedge ((k1_funct_1 \\
& X0 np_1 \neq np_1) \wedge ((k1_funct_1 X0 np_1 \neq np_2) \wedge ((k1_funct_1 X0 \\
& np_1 \neq np_3) \wedge ((k1_funct_1 X0 np_1 \neq np_4) \wedge (k1_funct_1 X0 np_1 \neq \\
& np_5)))))) \wedge (\neg(v3_modelc_2 X0) \wedge (k1_funct_1 X0 np_1 = k6_numbers)) \wedge \\
& ((\neg(v4_modelc_2 X0) \wedge (k1_funct_1 X0 np_1 = np_1)) \wedge (\neg(v5_modelc_2 \\
& X0) \wedge (k1_funct_1 X0 np_1 = np_2)) \wedge (\neg(v6_modelc_2 X0) \wedge (k1_funct_1 \\
& X0 np_1 = np_3)) \wedge (\neg(v7_modelc_2 X0) \wedge (k1_funct_1 X0 np_1 = np_4)) \wedge \\
& (\neg(v8_modelc_2 X0) \wedge (k1_funct_1 X0 np_1 = np_5))))))
\end{aligned} \tag{10}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \neg(r1_modelc_2 X0 X1) \wedge (r1_xxreal_0 (k3_finseq_1 X1) (k3_finseq_1 \\
& X0)))
\end{aligned}$$