

t42_modelc_2 (TMX-
hiTxM9XdQa9AT89sgi1m5caLYVXEaX83)

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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 $r3_modelc_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_modelc_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_modelc_2 : \iota \Rightarrow o$ be given. Let $v5_modelc_2 : \iota \Rightarrow o$ be given. Let $v7_modelc_2 : \iota \Rightarrow o$ 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 $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\ & \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\ & \quad \neg(\neg(\neg v4_modelc_2 X0) \wedge (\neg v5_modelc_2 X0) \wedge (\neg v7_modelc_2 X0) \wedge \\ & \quad (\neg v8_modelc_2 X0)))) \wedge ((r3_modelc_2 X1 X0) \wedge (\neg r2_modelc_2 X1 \\ & \quad (k11_modelc_2 X0)) \wedge (\neg r2_modelc_2 X1 (k12_modelc_2 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_modelc_2 X0) \wedge (m1_finseq_1 X0 k5_numbers)) \wedge \\ & ((v1_modelc_2 X1) \wedge (m1_finseq_1 X1 k5_numbers))) \Rightarrow (v1_modelc_2 \\ & \quad (k5_modelc_2 X0 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_finseq_1 X0 k5_numbers) \wedge (m1_finseq_1 \\ & X1 k5_numbers)) \Rightarrow (m2_finseq_1 (k5_modelc_2 X0 X1) k5_numbers) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& (\neg(\neg v4_modelc_2 X0) \wedge (\neg v5_modelc_2 X0) \wedge (\neg v7_modelc_2 X0) \wedge \\
& (\neg v8_modelc_2 X0))) \Rightarrow (\forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 \\
& X1 k5_numbers)) \Rightarrow (((v4_modelc_2 X0) \Rightarrow ((X1 = k12_modelc_2 X0) \Leftrightarrow (\\
& \exists X2.((v1_modelc_2 X2) \wedge (m2_finseq_1 X2 k5_numbers)) \wedge (\\
& k4_modelc_2 X2 X1 = X0)))) \wedge (((v5_modelc_2 X0) \Rightarrow ((X1 = k12_modelc_2 \\
& X0) \Leftrightarrow (\exists X2.((v1_modelc_2 X2) \wedge (m2_finseq_1 X2 k5_numbers)) \wedge \\
& (k5_modelc_2 X2 X1 = X0)))) \wedge (((v7_modelc_2 X0) \Rightarrow ((X1 = k12_modelc_2 \\
& X0) \Leftrightarrow (\exists X2.((v1_modelc_2 X2) \wedge (m2_finseq_1 X2 k5_numbers)) \wedge \\
& (k7_modelc_2 X2 X1 = X0)))) \wedge (\neg(v4_modelc_2 X0) \wedge (\neg v5_modelc_2 \\
& X0) \wedge (\neg v7_modelc_2 X0) \wedge (\neg(X1 = k12_modelc_2 X0) \Leftrightarrow (\exists X2. \\
& ((v1_modelc_2 X2) \wedge (m2_finseq_1 X2 k5_numbers)) \wedge (k8_modelc_2 \\
& X2 X1 = X0))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& (\neg(\neg v4_modelc_2 X0) \wedge (\neg v5_modelc_2 X0) \wedge (\neg v7_modelc_2 X0) \wedge \\
& (\neg v8_modelc_2 X0))) \Rightarrow (\forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 \\
& X1 k5_numbers)) \Rightarrow (((v4_modelc_2 X0) \Rightarrow ((X1 = k11_modelc_2 X0) \Leftrightarrow (\\
& \exists X2.((v1_modelc_2 X2) \wedge (m2_finseq_1 X2 k5_numbers)) \wedge (\\
& k4_modelc_2 X1 X2 = X0)))) \wedge (((v5_modelc_2 X0) \Rightarrow ((X1 = k11_modelc_2 \\
& X0) \Leftrightarrow (\exists X2.((v1_modelc_2 X2) \wedge (m2_finseq_1 X2 k5_numbers)) \wedge \\
& (k5_modelc_2 X1 X2 = X0)))) \wedge (((v7_modelc_2 X0) \Rightarrow ((X1 = k11_modelc_2 \\
& X0) \Leftrightarrow (\exists X2.((v1_modelc_2 X2) \wedge (m2_finseq_1 X2 k5_numbers)) \wedge \\
& (k7_modelc_2 X1 X2 = X0)))) \wedge (\neg(v4_modelc_2 X0) \wedge (\neg v5_modelc_2 \\
& X0) \wedge (\neg v7_modelc_2 X0) \wedge (\neg(X1 = k11_modelc_2 X0) \Leftrightarrow (\exists X2. \\
& ((v1_modelc_2 X2) \wedge (m2_finseq_1 X2 k5_numbers)) \wedge (k8_modelc_2 \\
& X1 X2 = X0))))))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& (v5_modelc_2 X0) \Leftrightarrow (\exists X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 \\
& X1 k5_numbers)) \wedge (\exists X2.((v1_modelc_2 X2) \wedge (m2_finseq_1 \\
& X2 k5_numbers)) \wedge (X0 = k5_modelc_2 X1 X2)))
\end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \forall X2.((v1_modelc_2 X2) \wedge (m2_finseq_1 X2 k5_numbers)) \Rightarrow (\\
& \neg(r3_modelc_2 X0 (k5_modelc_2 X1 X2)) \wedge (\neg r2_modelc_2 X0 X1) \wedge (\\
& \neg r2_modelc_2 X0 X2))))
\end{aligned}$$