t42_modelc_3 (TMEstJekQUTUr-PRCv9vMbuSPAxsFPCqcQJ6)

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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 $v1\_modelc\_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_modelc\_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_modelc\_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r6\_modelc\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_modelc\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_modelc\_2 : \iota \Rightarrow o$ be given. Let $k12\_modelc\_2 : \iota \Rightarrow \iota$ be given. Let $k11\_modelc\_2 : \iota \Rightarrow \iota$ be given. Let $v4\_modelc\_2 : \iota \Rightarrow o$ be given. Let $v5\_modelc\_2 : \iota \Rightarrow o$ be given. Let $v6\_modelc\_2 : \iota \Rightarrow o$ be given. Let $k10\_modelc\_2 : \iota \Rightarrow \iota$ be given. Let $u3\_modelc\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v8\_modelc\_2 : \iota \Rightarrow o$ be given. Let $k7\_modelc\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_modelc\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_modelc\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_modelc\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_modelc\_2\ X0) \wedge (m2\_finseq\_1\ X0\ k5\_numbers)) \Rightarrow (\forall X1.((v1\_modelc\_2\ X1) \wedge (m2\_finseq\_1\ X1\ k5\_numbers)) \Rightarrow (\forall X2.((v1\_modelc\_3\ X2\ X1) \wedge ((v3\_modelc\_3\ X2\ X1) \wedge (l1\_modelc\_3\ X2\ X1))) \Rightarrow (\forall X3.((v1\_modelc\_3\ X3\ X1) \wedge ((v3\_modelc\_3\ X3\ X1) \wedge (l1\_modelc\_3\ X3\ X1))) \Rightarrow (((r6\_modelc\_3\ X1\ X3\ X2) \wedge (X0 \in u1\_modelc\_3\ X1\ X2)) \Rightarrow (((v4\_modelc\_2\ X0) \Rightarrow ((k11\_modelc\_2\ X0 \in u1\_modelc\_3\ X1\ X2) \wedge (k12\_modelc\_2\ X0 \in u1\_modelc\_3\ X1\ X2))) \wedge ((\neg((v5\_modelc\_2\ X0) \vee (v7\_modelc\_2\ X0)) \wedge ((\neg k11\_modelc\_2\ X0 \in u1\_modelc\_3\ X1\ X2) \wedge (\neg k12\_modelc\_2\ X0 \in u1\_modelc\_3\ X1\ X2))) \wedge (((v6\_modelc\_2\ X0) \Rightarrow (k10\_modelc\_2\ X0 \in u3\_modelc\_3\ X1\ X2)) \wedge ((v8\_modelc\_2\ X0) \Rightarrow (k12\_modelc\_2\ X0 \in u1\_modelc\_3\ X1\ X2))))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_modelc\_2\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(\forall X1.((v1\_modelc\_2\ X1)\wedge(m2\_finseq\_1\ X1\ k5\_numbers))\Rightarrow(\forall X2.((v1\_modelc\_2\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\Rightarrow(\forall X3.((v1\_modelc\_3\ X3\ X2)\wedge((v3\_modelc\_3\ X3\ X2)\wedge(l1\_modelc\_3\ X3\ X2)))\Rightarrow(\forall X4.((v1\_modelc\_3\ X4\ X2)\wedge((v3\_modelc\_3\ X4\ X2)\wedge(l1\_modelc\_3\ X4\ X2)))\Rightarrow(\forall X5.((v1\_modelc\_3\ X5\ X2)\wedge((v3\_modelc\_3\ X5\ X2)\wedge(l1\_modelc\_3\ X5\ X2)))\Rightarrow(\neg(r6\_modelc\_3\ X2\ X4\ X3)\wedge((r6\_modelc\_3\ X2\ X3\ X5)\wedge((k7\_modelc\_2\ X0\ X1\in u1\_modelc\_3\ X2\ X3)\wedge((\neg X1\in u1\_modelc\_3\ X2\ X3)\wedge(\neg(X0\in u1\_modelc\_3\ X2\ X3)\wedge(k7\_modelc\_2\ X0\ X1\in u1\_modelc\_3\ X2\ X5)))))))))))) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_modelc\_2\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow((\neg(\neg v4\_modelc\_2\ X0)\wedge((\neg v5\_modelc\_2\ X0)\wedge((\neg v7\_modelc\_2\ X0)\wedge(\neg v8\_modelc\_2\ X0))))\Rightarrow(\forall X1.((v1\_modelc\_2\ X1)\wedge(m2\_finseq\_1\ X1\ k5\_numbers))\Rightarrow(((v4\_modelc\_2\ X0)\Rightarrow((X1=k12\_modelc\_2\ X0)\Leftrightarrow(\exists X2.((v1\_modelc\_2\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge(k4\_modelc\_2\ X2\ X1=X0))))\wedge(((v5\_modelc\_2\ X0)\Rightarrow((X1=k12\_modelc\_2\ X0)\Leftrightarrow(\exists X2.((v1\_modelc\_2\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge(k5\_modelc\_2\ X2\ X1=X0))))\wedge(((v7\_modelc\_2\ X0)\Rightarrow((X1=k12\_modelc\_2\ X0)\Leftrightarrow(\exists X2.((v1\_modelc\_2\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge(k7\_modelc\_2\ X2\ X1=X0))))\wedge(\neg(\neg v4\_modelc\_2\ X0)\wedge((\neg v5\_modelc\_2\ X0)\wedge((\neg v7\_modelc\_2\ X0)\wedge(\neg(X1=k12\_modelc\_2\ X0)\Leftrightarrow(\exists X2.((v1\_modelc\_2\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge(k8\_modelc\_2\ X2\ X1=X0))))))))))) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_modelc\_2\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow((\neg(\neg v4\_modelc\_2\ X0)\wedge((\neg v5\_modelc\_2\ X0)\wedge((\neg v7\_modelc\_2\ X0)\wedge(\neg v8\_modelc\_2\ X0))))\Rightarrow(\forall X1.((v1\_modelc\_2\ X1)\wedge(m2\_finseq\_1\ X1\ k5\_numbers))\Rightarrow(((v4\_modelc\_2\ X0)\Rightarrow((X1=k11\_modelc\_2\ X0)\Leftrightarrow(\exists X2.((v1\_modelc\_2\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge(k4\_modelc\_2\ X1\ X2=X0))))\wedge(((v5\_modelc\_2\ X0)\Rightarrow((X1=k11\_modelc\_2\ X0)\Leftrightarrow(\exists X2.((v1\_modelc\_2\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge(k5\_modelc\_2\ X1\ X2=X0))))\wedge(((v7\_modelc\_2\ X0)\Rightarrow((X1=k11\_modelc\_2\ X0)\Leftrightarrow(\exists X2.((v1\_modelc\_2\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge(k7\_modelc\_2\ X1\ X2=X0))))\wedge(\neg(\neg v4\_modelc\_2\ X0)\wedge((\neg v5\_modelc\_2\ X0)\wedge((\neg v7\_modelc\_2\ X0)\wedge(\neg(X1=k11\_modelc\_2\ X0)\Leftrightarrow(\exists X2.((v1\_modelc\_2\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge(k8\_modelc\_2\ X1\ X2=X0))))))))))) \tag{4}$$

Assume the following.

$$\forall X0.((v1\_modelc\_2\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow((v7\_modelc\_2\ X0)\Leftrightarrow(\exists X1.((v1\_modelc\_2\ X1)\wedge(m2\_finseq\_1\ X1\ k5\_numbers))\wedge(\exists X2.((v1\_modelc\_2\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge(X0 = k7\_modelc\_2\ X1\ X2)))) \tag{5}$$

Theorem 1

$$\forall X0.((v1\_modelc\_2\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(\forall X1.((v1\_modelc\_2\ X1)\wedge(m2\_finseq\_1\ X1\ k5\_numbers))\Rightarrow(\forall X2.((v1\_modelc\_3\ X2\ X1)\wedge((v3\_modelc\_3\ X2\ X1)\wedge(l1\_modelc\_3\ X2\ X1)))\Rightarrow(\forall X3.((v1\_modelc\_3\ X3\ X1)\wedge((v3\_modelc\_3\ X3\ X1)\wedge(l1\_modelc\_3\ X3\ X1)))\Rightarrow(\forall X4.((v1\_modelc\_3\ X4\ X1)\wedge((v3\_modelc\_3\ X4\ X1)\wedge(l1\_modelc\_3\ X4\ X1)))\Rightarrow(\neg(r6\_modelc\_3\ X1\ X3\ X2)\wedge((r6\_modelc\_3\ X1\ X2\ X4)\wedge((X0 \in u1\_modelc\_3\ X1\ X2)\wedge((v7\_modelc\_2\ X0)\wedge((\neg k12\_modelc\_2\ X0 \in u1\_modelc\_3\ X1\ X2)\wedge(\neg(k11\_modelc\_2\ X0 \in u1\_modelc\_3\ X1\ X2)\wedge(X0 \in u1\_modelc\_3\ X1\ X4))))))))))$$