t4_pasch (TMRyVwQKsTcN-Rbsz7irdaCVBKMqu7Q5ARUa)

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Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_analoaf : \iota \Rightarrow o$ be given. Let $l1\_analoaf : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r3\_diraf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_diraf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0) \wedge ((v2\_analoaf\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (((r3\_diraf\ X0\ X1\ X2\ X3) \wedge (r2\_diraf\ X0\ X1\ X2\ X3\ X4)) \Rightarrow ((X1 = X2) \vee (r3\_diraf\ X0\ X1\ X2\ X4)))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0) \wedge ((v2\_analoaf\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0)) \Rightarrow (((r3\_diraf\ X0\ X1\ X2\ X3) \wedge ((r3\_diraf\ X0\ X1\ X2\ X4) \wedge (r3\_diraf\ X0\ X1\ X2\ X5))) \Rightarrow ((X1 = X2) \vee (r3\_diraf\ X0\ X3\ X4\ X5)))))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0) \wedge ((v2\_analoaf\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow ((r3\_diraf\ X0\ X1\ X1\ X2) \wedge ((r3\_diraf\ X0\ X1\ X2\ X2) \wedge (r3\_diraf\ X0\ X1\ X2\ X1))))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v2\_analoaf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((r3\_diraf\ X0\ X1\ X2\ X3)\Rightarrow((r3\_diraf\ X0\ X1\ X3\ X2)\wedge((r3\_diraf\ X0\ X2\ X1\ X3)\wedge((r3\_diraf\ X0\ X2\ X3\ X1)\wedge((r3\_diraf\ X0\ X3\ X1\ X2)\wedge(r3\_diraf\ X0\ X3\ X2\ X1)))))))))) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v2\_analoaf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1\neq X2)\wedge((\neg(\neg(r2\_diraf\ X0\ X1\ X2\ X3\ X4)\wedge(r2\_diraf\ X0\ X1\ X2\ X5\ X6))\wedge((\neg(r2\_diraf\ X0\ X1\ X2\ X3\ X4)\wedge(r2\_diraf\ X0\ X5\ X6\ X1\ X2))\wedge((\neg(r2\_diraf\ X0\ X3\ X4\ X1\ X2)\wedge(r2\_diraf\ X0\ X5\ X6\ X1\ X2))\wedge(\neg(r2\_diraf\ X0\ X3\ X4\ X1\ X2)\wedge(r2\_diraf\ X0\ X1\ X2\ X5\ X6)))))\wedge(\neg r2\_diraf\ X0\ X3\ X4\ X5\ X6)))))))) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v2\_analoaf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow((r2\_diraf\ X0\ X1\ X2\ X3\ X4)\Rightarrow((r2\_diraf\ X0\ X1\ X2\ X4\ X3)\wedge((r2\_diraf\ X0\ X2\ X1\ X3\ X4)\wedge((r2\_diraf\ X0\ X2\ X1\ X4\ X3)\wedge((r2\_diraf\ X0\ X3\ X4\ X1\ X2)\wedge((r2\_diraf\ X0\ X3\ X4\ X2\ X1)\wedge((r2\_diraf\ X0\ X4\ X3\ X1\ X2)\wedge(r2\_diraf\ X0\ X4\ X3\ X2\ X1)))))))))))) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_analoaf\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_analoaf\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((r3\_diraf\ X0\ X1\ X2\ X3)\Leftrightarrow(r2\_diraf\ X0\ X1\ X2\ X1\ X3))))) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow((v2\_struct\_0\ X0)\Rightarrow(v7\_struct\_0\ X0)) \tag{9}$$

Theorem 1

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v2\_analoaf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0))\Rightarrow(((r3\_diraf\ X0\ X1\ X3\ X4)\wedge((r3\_diraf\ X0\ X1\ X2\ X5)\wedge((r3\_diraf\ X0\ X1\ X2\ X6)\wedge((r2\_diraf\ X0\ X2\ X3\ X4\ X5)\wedge(r2\_diraf\ X0\ X2\ X3\ X4\ X6)))))\Rightarrow((r3\_diraf\ X0\ X1\ X2\ X3)\vee(X5 = X6)))))))))$$