t40_group_9 (TMQ32GybnLkfjzsKngwP1cGxzLEzde9sbEJ)

October 27, 2020

Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_group\_1 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v3\_group\_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_group\_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4\_group\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_group\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_group\_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v15\_algstr\_0 : \iota \Rightarrow o$ be given. Let $g3\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u2\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_group\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow (\forall X1.(m1\_group\_2\ X1\ X0) \Rightarrow (\forall X2.((v1\_group\_3\ X2\ X0) \wedge (m1\_group\_2\ X2\ X0)) \Rightarrow ((m1\_group\_6\ X2\ X0\ X1) \Rightarrow ((v1\_group\_3\ X2\ X1) \wedge (m1\_group\_6\ X2\ X0\ X1))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \wedge (m1\_group\_2\ X1\ X0)) \Rightarrow (\forall X2.(m1\_group\_6\ X2\ X0\ X1) \Leftrightarrow (m1\_group\_2\ X2\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_group\_1\ X1) \wedge ((v3\_group\_1\ X1) \wedge ((v3\_group\_9\ X1\ X0) \wedge (l1\_group\_9\ X1\ X0))))) \Rightarrow (\forall X2.((v4\_group\_9\ X2\ X0\ X1) \wedge (m1\_group\_9\ X2\ X0\ X1)) \Rightarrow ((v15\_algstr\_0\ (g3\_algstr\_0\ (u1\_struct\_0\ X2)\ (u2\_algstr\_0\ X2))) \wedge ((v1\_group\_3\ (g3\_algstr\_0\ (u1\_struct\_0\ X2)\ (u2\_algstr\_0\ X2))\ X1) \wedge (m1\_group\_2\ (g3\_algstr\_0\ (u1\_struct\_0\ X2)\ (u2\_algstr\_0\ X2))\ X1)))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_group\_1\ X1)\wedge((v3\_group\_1\ X1)\wedge((v3\_group\_9\ X1\ X0)\wedge(l1\_group\_9\ X1\ X0)))))\Rightarrow(\forall X2.(m1\_group\_9\ X2\ X0\ X1)\Rightarrow((\neg v2\_struct\_0\ X2)\wedge((v2\_group\_1\ X2)\wedge((v3\_group\_1\ X2)\wedge((v3\_group\_9\ X2\ X0)\wedge(l1\_group\_9\ X2\ X0))))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_group\_9\ X1\ X0)\Rightarrow(l3\_algstr\_0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_group\_1\ X1)\wedge((v3\_group\_1\ X1)\wedge((v3\_group\_9\ X1\ X0)\wedge(l1\_group\_9\ X1\ X0)))))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v2\_group\_1\ X2)\wedge((v3\_group\_1\ X2)\wedge((v3\_group\_9\ X2\ X0)\wedge(l1\_group\_9\ X2\ X0)))))\Rightarrow((m1\_group\_9\ X2\ X0\ X1)\Leftrightarrow((m1\_group\_2\ X2\ X1)\wedge(\forall X3.(m1\_subset\_1\ X3\ X0)\Rightarrow(k3\_group\_9\ X0\ X2\ X3 = k2\_partfun1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X1)\ (k3\_group\_9\ X0\ X1\ X3)\ (u1\_struct\_0\ X2)))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_group\_1\ X1)\wedge((v3\_group\_1\ X1)\wedge((v3\_group\_9\ X1\ X0)\wedge(l1\_group\_9\ X1\ X0)))))\Rightarrow(\forall X2.(m1\_group\_9\ X2\ X0\ X1)\Rightarrow((v4\_group\_9\ X2\ X0\ X1)\Leftrightarrow(\forall X3.((v15\_algstr\_0\ X3)\wedge(m1\_group\_2\ X3\ X1))\Rightarrow((X3 = g3\_algstr\_0\ (u1\_struct\_0\ X2)\ (u2\_algstr\_0\ X2))\Rightarrow(v1\_group\_3\ X3\ X1))))) \tag{7}$$

Theorem 1

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_group\_1\ X1)\wedge((v3\_group\_1\ X1)\wedge((v3\_group\_9\ X1\ X0)\wedge(l1\_group\_9\ X1\ X0)))))\Rightarrow(\forall X2.((v4\_group\_9\ X2\ X0\ X1)\wedge(m1\_group\_9\ X2\ X0\ X1))\Rightarrow(\forall X3.(m1\_group\_9\ X3\ X0\ X1)\Rightarrow((m1\_group\_9\ X2\ X0\ X3)\Rightarrow((v4\_group\_9\ X2\ X0\ X3)\wedge(m1\_group\_9\ X2\ X0\ X3)))))$$