t18_scmfsa_2 (TMToXm6cA8cudpP4QtNaQnXb6g2aa8HKs9x)

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Let $v1\_ami\_2 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_scmfsa\_2 : \iota$ be given. Let $k2\_compos\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k1\_ami\_3 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_compos\_0 : \iota \Rightarrow o$ be given. Let $k4\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_compos\_1 : \iota \Rightarrow o$ be given. Let $v2\_compos\_0 : \iota \Rightarrow o$ be given. Let $v3\_compos\_0 : \iota \Rightarrow o$ be given. Let $v5\_compos\_0 : \iota \Rightarrow o$ be given. Let $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_ami\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_3 : \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_ami\_3)) \Rightarrow (m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2)) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0) \wedge (m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow ((v1\_ami\_2\ X0) \wedge (m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_ami\_3))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v1\_xboole\_0\ X0) \wedge (v1\_compos\_0\ X0)) \wedge (m1\_subset\_1\ X1\ X0)) \Rightarrow (k2\_compos\_0\ X0\ X1 = k4\_xtuple\_0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k1\_xtuple\_0\ (k4\_tarski\ X0\ X1) = X0 \tag{4}$$

Assume the following.

$$\forall X0.(l1\_compos\_1\ X0) \Rightarrow ((v1\_compos\_0\ (u1\_compos\_1\ X0)) \wedge ((v2\_compos\_0\ (u1\_compos\_1\ X0)) \wedge ((v3\_compos\_0\ (u1\_compos\_1\ X0)) \wedge (v5\_compos\_0\ (u1\_compos\_1\ X0))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_extpro\_1\ X1\ X0)\Rightarrow((l1\_memstr\_0\ X1\ X0)\wedge(l1\_compos\_1\ X1)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\wedge((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))))\Rightarrow(m1\_subset\_1\ (k6\_scmfsa\_2\ X0\ X1)\ (u1\_compos\_1\ k1\_scmfsa\_2)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_ami\_3)))\wedge((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_ami\_3))))\Rightarrow(m1\_subset\_1\ (k2\_ami\_3\ X0\ X1)\ (u1\_compos\_1\ k1\_ami\_3)) \tag{8}$$

Assume the following.

$$(v1\_extpro\_1\ k1\_scmfsa\_2\ np\_\_3)\wedge(l1\_extpro\_1\ k1\_scmfsa\_2\ np\_\_3) \tag{9}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow(\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_compos\_1\ k1\_scmfsa\_2))\Rightarrow((X2 = k6\_scmfsa\_2\ X0\ X1)\Leftrightarrow(\exists X3.((v1\_ami\_2\ X3)\wedge(m1\_subset\_1\ X3\ (u1\_struct\_0\ k1\_ami\_3)))\wedge(\exists X4.((v1\_ami\_2\ X4)\wedge(m1\_subset\_1\ X4\ (u1\_struct\_0\ k1\_ami\_3)))\wedge((X0 = X3)\wedge((X1 = X4)\wedge(X2 = k2\_ami\_3\ X3\ X4)))))))) \tag{10}$$

Assume the following.

$$\forall X0.k4\_xtuple\_0\ X0 = k1\_xtuple\_0\ (k1\_xtuple\_0\ X0) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarski\ X0\ X1 = k2\_tarski\ (k2\_tarski\ X0\ X1)\ (k1\_tarski\ X0) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k3\_xtuple\_0\ X0\ X1\ X2 = k4\_tarski\ (k4\_tarski\ X0\ X1)\ X2 \tag{13}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_ami\_3)))\Rightarrow(\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_ami\_3)))\Rightarrow(k2\_ami\_3\ X0\ X1 = k3\_xtuple\_0\ np\_\_1\ k1\_xboole\_0\ (k10\_finseq\_1\ X0\ X1))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarski\ X0\ X1 = k2\_tarski\ X1\ X0 \tag{15}$$

Assume the following.

$$\forall X0.(v5\_compos\_0\ X0) \Rightarrow (\neg v1\_xboole\_0\ X0) \tag{16}$$

Theorem 1

$$\forall X0.((v1\_ami\_2\ X0) \wedge (m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow$$
$$(\forall X1.((v1\_ami\_2\ X1) \wedge (m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow$$
$$(k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k6\_scmfsa\_2\ X0\ X1) = np\_\_1))$$