t16_scmpds_2 (TMGX-oecY7u5md4EV9yCce76mqQM5SJ89Sn6)

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Let $v1\_int\_1 : \iota \Rightarrow o$ be given. 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 $k1\_scmpds\_2 : \iota$ be given. Let $k2\_compos\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_4 : \iota$ 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 $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_2 : \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k11\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(((\neg v1\_xboole\_0\ X0) \wedge (v1\_compos\_0\ X0)) \wedge (m1\_subset\_1\ X1\ X0)) \Rightarrow (k2\_compos\_0\ X0\ X1 = k4\_xtuple\_0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k4\_xtuple\_0\ (k3\_xtuple\_0\ X0\ X1\ X2) = X0 \tag{2}$$

Assume the following.

$$\forall X0.(l1\_compos\_1\ X0) \Rightarrow ((v1\_compos\_0\ (u1\_compos\_1\ X0)) \wedge ((v2\_compos\_0\ (u1\_compos\_1\ X0)) \wedge ((v3\_compos\_0\ (u1\_compos\_1\ X0)) \wedge (v5\_compos\_0\ (u1\_compos\_1\ X0))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_extpro\_1\ X1\ X0) \Rightarrow ((l1\_memstr\_0\ X1\ X0) \wedge (l1\_compos\_1\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_ami\_2\ X0) \wedge (m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmpds\_2))) \wedge ((v1\_int\_1\ X1) \wedge (v1\_int\_1\ X2))) \Rightarrow (m1\_subset\_1\ (k7\_scmpds\_2\ X0\ X1\ X2)\ (u1\_compos\_1\ k1\_scmpds\_2)) \tag{5}$$

Assume the following.

$$(v1\_extpro\_1\ k1\_scmpds\_2\ np\_\_2)\wedge(l1\_extpro\_1\ k1\_scmpds\_2\ np\_\_2) \quad (6)$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmpds\_2)))\Rightarrow (\forall X1.(v1\_int\_1\ X1)\Rightarrow(\forall X2.(v1\_int\_1\ X2)\Rightarrow(k7\_scmpds\_2\ X0\ X1\ X2 = k3\_xtuple\_0\ np\_\_4\ k1\_xboole\_0\ (k11\_finseq\_1\ X0\ X1\ X2)))) \quad (7)$$

Assume the following.

$$\forall X0.(v5\_compos\_0\ X0)\Rightarrow(\neg v1\_xboole\_0\ X0) \quad (8)$$

Theorem 1

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(\forall X1.(v1\_int\_1\ X1)\Rightarrow(\forall X2.((v1\_ami\_2\ X2)\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ k1\_scmpds\_2)))\Rightarrow(k2\_compos\_0\ (u1\_compos\_1\ k1\_scmpds\_2)\ (k7\_scmpds\_2\ X2\ X0\ X1) = np\_\_4)))$$