t15_scmpds_6 (TMbZ1wWpvr8DQHxMcizreRAdJAcozsSWBnd)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_scmpds\_2 : \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v5\_funct\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $v5\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $v6\_compos\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_scmpds\_5 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v1\_afinsq\_1 : \iota \Rightarrow o$ be given. Let $v2\_scmpds\_4 : \iota \Rightarrow o$ be given. Let $v3\_scmpds\_4 : \iota \Rightarrow o$ be given. Let $v1\_ami\_2 : \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_scmpds\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_scmpds\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_compos\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_compos\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_scmpds\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_compos\_1 : \iota \Rightarrow o$ be given. Let $k3\_afinsq\_1 : \iota \Rightarrow \iota$ 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 $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v5\_relat\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2)) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_partfun1\ X0\ k5\_numbers))))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ (u1\_struct\_0\ k1\_scmpds\_2)) \wedge ((v1\_funct\_1\ X1) \wedge ((v5\_funct\_1\ X1\ (k2\_memstr\_0\ np\_\_2\ k1\_scmpds\_2)) \wedge ((v1\_partfun1\ X1\ (u1\_struct\_0\ k1\_scmpds\_2)) \wedge (v5\_memstr\_0\ X1\ np\_\_2\ k1\_scmpds\_2\ k6\_numbers))))))) \Rightarrow (\forall X2.((v1\_scmpds\_5\ X2) \wedge (m1\_subset\_1\ X2\ (u1\_compos\_1\ k1\_scmpds\_2))) \Rightarrow (k2\_extpro\_1\ np\_\_2\ k1\_scmpds\_2\ X2\ X1 = k6\_scmpds\_4\ (k9\_compos\_1\ k1\_scmpds\_2\ X2)\ X1\ X0)))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmpds\_2)))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v5\_relat\_1\ X1\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X1)\wedge(v1\_partfun1\ X1\ k5\_numbers)))))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ (u1\_struct\_0\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X2)\wedge((v5\_funct\_1\ X2\ (k2\_memstr\_0\ np\_\_2\ k1\_scmpds\_2))\wedge((v1\_partfun1\ X2\ (u1\_struct\_0\ k1\_scmpds\_2))\wedge(v5\_memstr\_0\ X2\ np\_\_2\ k1\_scmpds\_2\ k6\_numbers))))))\Rightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge((v1\_relat\_1\ X3)\wedge((v4\_relat\_1\ X3\ k5\_numbers)\wedge((v5\_relat\_1\ X3\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X3)\wedge((v1\_finset\_1\ X3)\wedge((v1\_afinsq\_1\ X3)\wedge((v2\_compos\_1\ X3\ k1\_scmpds\_2)\wedge(v2\_scmpds\_4\ X3)))))))))\Rightarrow(\forall X4.((\neg v1\_xboole\_0\ X4)\wedge((v1\_relat\_1\ X4)\wedge((v4\_relat\_1\ X4\ k5\_numbers)\wedge((v5\_relat\_1\ X4\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X4)\wedge((v1\_finset\_1\ X4)\wedge((v1\_afinsq\_1\ X4)\wedge((v2\_scmpds\_4\ X4)\wedge(v3\_scmpds\_4\ X4)))))))))\Rightarrow(k1\_funct\_1\ (k6\_scmpds\_4\ (k1\_scmpds\_4\ X3\ X4)\ X2\ X1)\ X0 = k1\_funct\_1\ (k6\_scmpds\_4\ X4\ (k8\_memstr\_0\ np\_\_2\ k1\_scmpds\_2\ (k6\_scmpds\_4\ X3\ X2\ X1))\ X1)\ X0)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_compos\_1\ X0)\wedge(m1\_subset\_1\ X1\ (u1\_compos\_1\ X0)))\Rightarrow(k9\_compos\_1\ X0\ X1 = k3\_afinsq\_1\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k3\_afinsq\_1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.((v6\_compos\_0\ X0\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2)))\Rightarrow(v2\_compos\_1\ (k3\_afinsq\_1\ X0)\ k1\_scmpds\_2) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_scmpds\_5\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2)))\Rightarrow((\neg v1\_xboole\_0\ (k3\_afinsq\_1\ X0))\wedge((v1\_relat\_1\ (k3\_afinsq\_1\ X0))\wedge((v4\_relat\_1\ (k3\_afinsq\_1\ X0)\ k5\_numbers)\wedge((v5\_relat\_1\ (k3\_afinsq\_1\ X0)\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ (k3\_afinsq\_1\ X0))\wedge((v1\_finset\_1\ (k3\_afinsq\_1\ X0))\wedge((v1\_afinsq\_1\ (k3\_afinsq\_1\ X0))\wedge(v2\_scmpds\_4\ (k3\_afinsq\_1\ X0)))))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_extpro\_1\ X1\ X0)\Rightarrow((l1\_memstr\_0\ X1\ X0)\wedge(l1\_compos\_1\ X1)) \tag{7}$$

Assume the following.

$$(v1\_extpro\_1\ k1\_scmpds\_2\ np\_\_2)\wedge(l1\_extpro\_1\ k1\_scmpds\_2\ np\_\_2) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1\ X0\ X1 = k7\_funcop\_1\ (k1\_tarski\ X0)\ X1 \tag{9}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v5\_relat\_1\ X1\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X1)\wedge((v1\_finset\_1\ X1)\wedge(v1\_afinsq\_1\ X1)))))))\Rightarrow(k2\_scmpds\_4\ X0\ X1 = k1\_scmpds\_4\ (k9\_compos\_1\ k1\_scmpds\_2\ X0)\ X1)) \tag{10}$$

Assume the following.

$$\forall X0.k3\_afinsq\_1\ X0 = k16\_funcop\_1\ k6\_numbers\ X0 \tag{11}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v5\_relat\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X0)\wedge(v1\_partfun1\ X0\ k5\_numbers)))))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ (u1\_struct\_0\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X1)\wedge((v5\_funct\_1\ X1\ (k2\_memstr\_0\ np\_\_2\ k1\_scmpds\_2))\wedge((v1\_partfun1\ X1\ (u1\_struct\_0\ k1\_scmpds\_2))\wedge(v5\_memstr\_0\ X1\ np\_\_2\ k1\_scmpds\_2\ k6\_numbers))))))\Rightarrow(\forall X2.((v6\_compos\_0\ X2\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_scmpds\_5\ X2)\wedge(m1\_subset\_1\ X2\ (u1\_compos\_1\ k1\_scmpds\_2))))\Rightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge((v1\_relat\_1\ X3)\wedge((v4\_relat\_1\ X3\ k5\_numbers)\wedge((v5\_relat\_1\ X3\ (u1\_compos\_1\ k1\_scmpds\_2))\wedge((v1\_funct\_1\ X3)\wedge((v1\_finset\_1\ X3)\wedge((v1\_afinsq\_1\ X3)\wedge((v2\_scmpds\_4\ X3)\wedge(v3\_scmpds\_4\ X3)))))))))\Rightarrow(\forall X4.((v1\_ami\_2\ X4)\wedge(m1\_subset\_1\ X4\ (u1\_struct\_0\ k1\_scmpds\_2)))\Rightarrow(k1\_funct\_1\ (k6\_scmpds\_4\ (k2\_scmpds\_4\ X2\ X3)\ X1\ X0)\ X4 = k1\_funct\_1\ (k6\_scmpds\_4\ X3\ (k8\_memstr\_0\ np\_\_2\ k1\_scmpds\_2\ (k2\_extpro\_1\ np\_\_2\ k1\_scmpds\_2\ X2\ X1))\ X0)\ X4)))))$$