t27_scmfsa8b (TMXVCbxae4WWAGLHwuXXz2pvm1riHFDsmkM)

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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 $k1\_scmfsa\_2 : \iota$ 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 $np\_\_3 : \iota$ 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 $v1\_ami\_2 : \iota \Rightarrow o$ be given. Let $v1\_scmfsa\_m : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $r5\_scmfsa7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r6\_scmfsa7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_scmfsa8b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_scmfsa8b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_scmfsa8b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v5\_relat\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2)) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_partfun1\ X0\ k5\_numbers))))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)) \wedge ((v1\_funct\_1\ X1) \wedge ((v5\_funct\_1\ X1\ (k2\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2)) \wedge (v1\_partfun1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))))))) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge ((v1\_relat\_1\ X2) \wedge ((v4\_relat\_1\ X2\ k5\_numbers) \wedge ((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmfsa\_2)) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_finset\_1\ X2) \wedge (v1\_afinsq\_1\ X2))))))) \Rightarrow (\forall X3.((\neg v1\_xboole\_0\ X3) \wedge ((v1\_relat\_1\ X3) \wedge ((v4\_relat\_1\ X3\ k5\_numbers) \wedge ((v5\_relat\_1\ X3\ (u1\_compos\_1\ k1\_scmfsa\_2)) \wedge ((v1\_funct\_1\ X3) \wedge ((v1\_finset\_1\ X3) \wedge (v1\_afinsq\_1\ X3))))))) \Rightarrow (\forall X4.((v1\_ami\_2\ X4) \wedge ((\neg v1\_scmfsa\_m\ X4) \wedge (m1\_subset\_1\ X4\ (u1\_struct\_0\ k1\_scmfsa\_2))))) \Rightarrow (((k1\_funct\_1\ X1\ X4 = k6\_numbers) \wedge ((r5\_scmfsa7b\ X2\ X1\ X0) \wedge (r6\_scmfsa7b\ X2\ X1\ X0))) \Rightarrow ((r5\_scmfsa7b\ (k1\_scmfsa8b\ X4\ X2\ X3)\ X1\ X0) \wedge (r6\_scmfsa7b\ (k1\_scmfsa8b\ X4\ X2\ X3)\ X1\ X0)))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\wedge(((\neg v1\_xboole\_0\ X1)\wedge((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v5\_relat\_1\ X1\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X1)\wedge((v1\_finset\_1\ X1)\wedge(v1\_afinsq\_1\ X1)))))))\wedge((\neg v1\_xboole\_0\ X2)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ k5\_numbers)\wedge((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X2)\wedge((v1\_finset\_1\ X2)\wedge(v1\_afinsq\_1\ X2)))))))))\Rightarrow((\neg v1\_xboole\_0\ (k2\_scmfsa8b\ X0\ X1\ X2))\wedge((v1\_relat\_1\ (k2\_scmfsa8b\ X0\ X1\ X2))\wedge((v4\_relat\_1\ (k2\_scmfsa8b\ X0\ X1\ X2)\ k5\_numbers)\wedge((v5\_relat\_1\ (k2\_scmfsa8b\ X0\ X1\ X2)\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ (k2\_scmfsa8b\ X0\ X1\ X2))\wedge((v1\_finset\_1\ (k2\_scmfsa8b\ X0\ X1\ X2))\wedge(v1\_afinsq\_1\ (k2\_scmfsa8b\ X0\ X1\ X2))))))))) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v5\_relat\_1\ X1\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X1)\wedge((v1\_finset\_1\ X1)\wedge(v1\_afinsq\_1\ X1)))))))\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ k5\_numbers)\wedge((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X2)\wedge((v1\_finset\_1\ X2)\wedge(v1\_afinsq\_1\ X2)))))))\Rightarrow(k3\_scmfsa8b\ X0\ X1\ X2 = k1\_scmfsa8b\ X0\ X2\ (k2\_scmfsa8b\ X0\ X2\ X1)))) \tag{3}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v5\_relat\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X0)\wedge(v1\_partfun1\ X0\ k5\_numbers)))))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X1)\wedge((v5\_funct\_1\ X1\ (k2\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2))\wedge(v1\_partfun1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))))))\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ k5\_numbers)\wedge((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X2)\wedge((v1\_finset\_1\ X2)\wedge(v1\_afinsq\_1\ X2)))))))\Rightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge((v1\_relat\_1\ X3)\wedge((v4\_relat\_1\ X3\ k5\_numbers)\wedge((v5\_relat\_1\ X3\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X3)\wedge((v1\_finset\_1\ X3)\wedge(v1\_afinsq\_1\ X3)))))))\Rightarrow(\forall X4.((v1\_ami\_2\ X4)\wedge((\neg v1\_scmfsa\_m\ X4)\wedge(m1\_subset\_1\ X4\ (u1\_struct\_0\ k1\_scmfsa\_2))))\Rightarrow(((k1\_funct\_1\ X1\ X4 = k6\_numbers)\wedge((r5\_scmfsa7b\ X3\ X1\ X0)\wedge(r6\_scmfsa7b\ X3\ X1\ X0)))\Rightarrow((r5\_scmfsa7b\ (k3\_scmfsa8b\ X4\ X2\ X3)\ X1\ X0)\wedge(r6\_scmfsa7b\ (k3\_scmfsa8b\ X4\ X2\ X3)\ X1\ X0))))))$$