t67_scmfsa8c (TMQCJgouUKt-DtccU57GWBRyHhbsGiWyn8fb)

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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 $v1\_scmfsa7b : \iota \Rightarrow o$ be given. Let $r6\_scmfsa7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_scmfsa\_m : \iota \Rightarrow \iota$ be given. Let $r5\_scmfsa7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_scmfsa6b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_scmfsa\_2 : \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_ami\_2 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4\_scmfsa7b : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $v1\_scmfsa\_m : \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)) \wedge ((v1\_funct\_1\ X0) \wedge (v5\_funct\_1\ X0\ (k2\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2))))) \Rightarrow (k1\_funct\_1\ (k1\_scmfsa\_m\ X0)\ (k4\_scmfsa\_2\ k6\_numbers) = np\_\_1) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v5\_relat\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X0)\wedge(v1\_partfun1\ X0\ k5\_numbers)))))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X1)\wedge((v5\_funct\_1\ X1\ (k2\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2))\wedge(v1\_partfun1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))))))\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ k5\_numbers)\wedge((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X2)\wedge((v1\_finset\_1\ X2)\wedge(v1\_afinsq\_1\ X2)))))))\Rightarrow(\forall X3.((v1\_ami\_2\ X3)\wedge(m1\_subset\_1\ X3\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow(\forall X4.(m2\_subset\_1\ X4\ k1\_numbers\ k5\_numbers)\Rightarrow(((r5\_scmfsa7b\ X2\ (k1\_scmfsa\_m\ X1)\ X0)\wedge(r6\_scmfsa7b\ X2\ (k1\_scmfsa\_m\ X1)\ X0))\Rightarrow((r4\_scmfsa7b\ X2\ X3)\vee(k1\_funct\_1\ (k1\_scmfsa6b\ X2\ X1\ X0)\ X3 = k1\_funct\_1\ (k5\_extpro\_1\ np\_\_3\ k1\_scmfsa\_2\ (k1\_funct\_4\ X0\ X2)\ (k8\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2\ (k1\_scmfsa\_m\ X1))\ X4)\ X3)))))))) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X0)\wedge((v5\_funct\_1\ X0\ (k2\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2))\wedge(v1\_partfun1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v5\_relat\_1\ X1\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X1)\wedge(v1\_partfun1\ X1\ k5\_numbers)))))\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ k5\_numbers)\wedge((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X2)\wedge((v1\_finset\_1\ X2)\wedge(v1\_afinsq\_1\ X2)))))))\Rightarrow(\forall X3.((v1\_ami\_2\ X3)\wedge(m1\_subset\_1\ X3\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow((r5\_scmfsa7b\ X2\ X0\ X1)\Rightarrow((r4\_scmfsa7b\ X2\ X3)\vee(\forall X4.(m2\_subset\_1\ X4\ k1\_numbers\ k5\_numbers)\Rightarrow(k1\_funct\_1\ (k5\_extpro\_1\ np\_\_3\ k1\_scmfsa\_2\ (k1\_funct\_4\ X1\ X2)\ (k8\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2\ X0)\ X4)\ X3 = k1\_funct\_1\ X0\ X3))))))) \tag{3}$$

Assume the following.

$$m1\_subset\_1\ k1\_xboole\_0\ k4\_ordinal1 \tag{4}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_3)\wedge(m2\_subset\_1\ np\_\_3\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_3\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_3\ k1\_numbers)) \tag{5}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{6}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{7}$$

Assume the following.

$$(v1\_ami\_2\ (k4\_scmfsa\_2\ k6\_numbers))\wedge(v1\_scmfsa\_m\ (k4\_scmfsa\_2\ k6\_numbers)) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X0)\wedge((v5\_funct\_1\ X0\ (k2\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2))\wedge(v1\_partfun1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))))))\Rightarrow((v1\_relat\_1\ (k1\_scmfsa\_m\ X0))\wedge((v4\_relat\_1\ (k1\_scmfsa\_m\ X0)\ (u1\_struct\_0\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ (k1\_scmfsa\_m\ X0))\wedge((v5\_funct\_1\ (k1\_scmfsa\_m\ X0)\ (k2\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2))\wedge(v1\_partfun1\ (k1\_scmfsa\_m\ X0)\ (u1\_struct\_0\ k1\_scmfsa\_2)))))) \tag{9}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((v1\_ami\_2\ (k4\_scmfsa\_2\ X0))\wedge(m1\_subset\_1\ (k4\_scmfsa\_2\ X0)\ (u1\_struct\_0\ k1\_scmfsa\_2))) \tag{10}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X0)\wedge(v5\_funct\_1\ X0\ (k2\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2)))))\Rightarrow((v1\_relat\_1\ (k1\_scmfsa\_m\ X0))\wedge((v4\_relat\_1\ (k1\_scmfsa\_m\ X0)\ (u1\_struct\_0\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ (k1\_scmfsa\_m\ X0))\wedge(v5\_funct\_1\ (k1\_scmfsa\_m\ X0)\ (k2\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2))))) \tag{11}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v5\_relat\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge(v1\_funct\_1\ X0))))\Rightarrow((v1\_scmfsa7b\ X0)\Leftrightarrow(\neg r4\_scmfsa7b\ X0\ (k4\_scmfsa\_2\ k6\_numbers))) \tag{12}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{13}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v5\_relat\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X0)\wedge(v1\_partfun1\ X0\ k5\_numbers)))))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X1)\wedge((v5\_funct\_1\ X1\ (k2\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2))\wedge(v1\_partfun1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))))))\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ k5\_numbers)\wedge((v5\_relat\_1\ X2\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X2)\wedge((v1\_finset\_1\ X2)\wedge((v1\_afinsq\_1\ X2)\wedge(v1\_scmfsa7b\ X2))))))))\Rightarrow(((r6\_scmfsa7b\ X2\ (k1\_scmfsa\_m\ X1)\ X0)\wedge(r5\_scmfsa7b\ X2\ (k1\_scmfsa\_m\ X1)\ X0))\Rightarrow((k1\_funct\_1\ (k1\_scmfsa6b\ X2\ X1\ X0)\ (k4\_scmfsa\_2\ k6\_numbers) = np\_\_1)\wedge(\forall X3.(m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers)\Rightarrow(k1\_funct\_1\ (k5\_extpro\_1\ np\_\_3\ k1\_scmfsa\_2\ (k1\_funct\_4\ X0\ X2)\ (k8\_memstr\_0\ np\_\_3\ k1\_scmfsa\_2\ (k1\_scmfsa\_m\ X1))\ X3)\ (k4\_scmfsa\_2\ k6\_numbers) = np\_\_1))))))$$