

t13\_scmfsa\_m  
(TMF5AxgtqZC9Eury6mhPju3ArBziE9D52jJ)

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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  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_scmfsa\_2 : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_scmfsa\_2 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_scmfsa\_m : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_ami\_2 : \iota \Rightarrow o$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $v4\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $l1\_compos\_1 : \iota \Rightarrow o$  be given. Let  $v1\_setfam\_1 : \iota \Rightarrow o$  be given. Let  $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (r1\_tarski X0 (k1\_funct\_4 X1 X0))) \quad (1)$$

Assume the following.

$$((v2\_xxreal\_0 np\_3) \wedge (m2\_subset\_1 np\_3 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_3 k5\_numbers) \wedge (m1\_subset\_1 np\_3 k1\_numbers)) \quad (2)$$

Assume the following.

$$\neg v1\_xboole\_0 np\_3 \quad (3)$$

Assume the following.

$$((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (4)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (5)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (6)$$

Assume the following.

$$(v3\_memstr\_0 \ k1\_scmf sa\_2 \ np\_3) \wedge (v1\_extpro\_1 \ k1\_scmf sa\_2 \ np\_3) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. & (((v1\_ami\_2 \ X0) \wedge (m1\_subset\_1 \ X0 \ (u1\_struct\_0 \\ & k1\_scmf sa\_2))) \wedge (v1\_int\_1 \ X1)) \Rightarrow ((v1\_relat\_1 \ (k16\_funcop\_1 \ X0 \\ & X1)) \wedge ((v4\_relat\_1 \ (k16\_funcop\_1 \ X0 \ X1) \ (u1\_struct\_0 \ k1\_scmf sa\_2)) \wedge \\ & ((v1\_funct\_1 \ (k16\_funcop\_1 \ X0 \ X1)) \wedge ((v5\_funct\_1 \ (k16\_funcop\_1 \\ & X0 \ X1) \ (k2\_memstr\_0 \ np\_3 \ k1\_scmf sa\_2)) \wedge (v4\_memstr\_0 \ (k16\_funcop\_1 \\ & X0 \ X1) \ np\_3 \ k1\_scmf sa\_2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$v1\_xboole\_0 \ k1\_xboole\_0 \quad (9)$$

Assume the following.

$$\begin{aligned} (\neg v2\_struct\_0 \ k1\_scmf sa\_2) \wedge ((v2\_memstr\_0 \ k1\_scmf sa\_2 \ np\_3) \wedge \\ (v1\_extpro\_1 \ k1\_scmf sa\_2 \ np\_3)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. (l1\_extpro\_1 \ X1 \ X0) \Rightarrow ((l1\_memstr\_0 \ X1 \ X0) \wedge (l1\_compos\_1 \ X1)) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. & ((\neg v1\_setfam\_1 \ X0) \wedge (((\neg v2\_struct\_0 \\ & X1) \wedge ((v2\_memstr\_0 \ X1 \ X0) \wedge ((v3\_memstr\_0 \ X1 \ X0) \wedge (l1\_memstr\_0 \ X1 \\ & X0)))) \wedge ((v1\_relat\_1 \ X2) \wedge ((v4\_relat\_1 \ X2 \ (u1\_struct\_0 \ X1)) \wedge \\ & (v1\_funct\_1 \ X2) \wedge (v5\_funct\_1 \ X2 \ (k2\_memstr\_0 \ X0 \ X1)))))) \Rightarrow ((v1\_relat\_1 \\ & (k8\_memstr\_0 \ X0 \ X1 \ X2)) \wedge ((v4\_relat\_1 \ (k8\_memstr\_0 \ X0 \ X1 \ X2) \ (u1\_struct\_0 \\ & X1)) \wedge ((v1\_funct\_1 \ (k8\_memstr\_0 \ X0 \ X1 \ X2)) \wedge (v5\_funct\_1 \ (k8\_memstr\_0 \\ & X0 \ X1 \ X2) \ (k2\_memstr\_0 \ X0 \ X1)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. & (v1\_funct\_1 \ (k7\_funcop\_1 \ X0 \ X1)) \wedge ((v1\_funct\_2 \\ & (k7\_funcop\_1 \ X0 \ X1) \ X0 \ (k1\_tarSKI \ X1)) \wedge (m1\_subset\_1 \ (k7\_funcop\_1 \\ & X0 \ X1) \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ (k1\_tarSKI \ X1)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((v1\_ami\_2\ (k4\_scmfsa\_2\ X0))\wedge(m1\_subset\_1\ (k4\_scmfsa\_2\ X0)\ (u1\_struct\_0\ k1\_scmfsa\_2))) \quad (14)$$

Assume the following.

$$(v1\_extpro\_1\ k1\_scmfsa\_2\ np\_3)\wedge(l1\_extpro\_1\ k1\_scmfsa\_2\ np\_3) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1\ X0\ X1 = k7\_funcop\_1\ (k1\_tarski\ X0)\ X1 \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))\wedge \\ & ((v1\_funct\_1\ X0)\wedge(v5\_funct\_1\ X0\ (k2\_memstr\_0\ np\_3\ k1\_scmfsa\_2))))))\Rightarrow \\ & (k1\_scmfsa\_m\ X0 = k1\_funct\_4\ X0\ (k8\_memstr\_0\ np\_3\ k1\_scmfsa\_2 \\ & (k16\_funcop\_1\ (k4\_scmfsa\_2\ k6\_numbers)\ np\_1))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \quad (18)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(v7\_ordinal1\ X0) \quad (19)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_int\_1\ X0) \quad (20)$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(v7\_ordinal1\ X0))\Rightarrow((\neg v1\_xboole\_0\ X0)\wedge((v7\_ordinal1\ X0)\wedge(\neg v1\_setfam\_1\ X0))) \quad (21)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))\wedge \\ & ((v1\_funct\_1\ X0)\wedge(v5\_funct\_1\ X0\ (k2\_memstr\_0\ np\_3\ k1\_scmfsa\_2))))))\Rightarrow \\ & (r1\_tarski\ (k8\_memstr\_0\ np\_3\ k1\_scmfsa\_2\ (k16\_funcop\_1\ (k4\_scmfsa\_2\ k6\_numbers)\ np\_1))\ (k1\_scmfsa\_m\ X0)) \end{aligned}$$