

t22\_scmfsa\_2  
(TMKBFM2XUkfkKKVFzZWfSGD4eJxexeuRu49)

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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  $k1\_scmfsa\_2 : \iota$  be given. Let  $k2\_compos\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_compos\_1 : \iota \Rightarrow \iota$  be given. Let  $k10\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_5 : \iota$  be given. Let  $k1\_ami\_3 : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k10\_ami\_3 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  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  $k1\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  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  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_scmfsa\_2 : \iota \Rightarrow \iota$  be given. Let  $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_3 : \iota$  be given. Let  $k6\_ami\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_ami\_3))) \Rightarrow \\ (\exists X1.(m1\_subset\_1 X1 k5\_numbers) \wedge (X0 = k10\_ami\_3 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmfsa\_2))) \Rightarrow \\ ((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_ami\_3))) \end{aligned} \quad (2)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v1\_xboole\_0 X0) \wedge (v1\_compos\_0 X0)) \wedge \\ (m1\_subset\_1 X1 X0)) \Rightarrow (k2\_compos\_0 X0 X1 = k4\_xtuple\_0 X1) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. k1\_xtuple\_0 (k4\_tarski X0 X1) = X0 \quad (5)$$

Assume the following.

$$\forall X0.(l1\_compos\_1 X0) \Rightarrow ((v1\_compos\_0 (u1\_compos\_1 X0)) \wedge ((v2\_compos\_0 (u1\_compos\_1 X0)) \wedge ((v3\_compos\_0 (u1\_compos\_1 X0)) \wedge (v5\_compos\_0 (u1\_compos\_1 X0)))))) \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow ((v1\_ami\_2 (k4\_scmfsa\_2 X0)) \wedge (m1\_subset\_1 (k4\_scmfsa\_2 X0) (u1\_struct\_0 k1\_scmfsa\_2))) \quad (8)$$

Assume the following.

$$(v1\_extpro\_1 k1\_scmfsa\_2 np\_3) \wedge (l1\_extpro\_1 k1\_scmfsa\_2 np\_3) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmfsa\_2))) \wedge ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmfsa\_2)))) \Rightarrow (m1\_subset\_1 (k10\_scmfsa\_2 X0 X1) (u1\_compos\_1 k1\_scmfsa\_2)) \quad (10)$$

Assume the following.

$$\forall X0.((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_ami\_3))) \Rightarrow (\forall X1.((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_ami\_3))) \Rightarrow (k6\_ami\_3 X0 X1 = k3\_xtuple\_0 np\_5 k1\_xboole\_0 (k10\_finseq\_1 X0 X1))) \quad (11)$$

Assume the following.

$$\forall X0.k4\_xtuple\_0 X0 = k1\_xtuple\_0 (k1\_xtuple\_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (k4\_scmfsa\_2 X0 = k10\_ami\_3 X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarski X0 X1 = k2\_tarski (k2\_tarski X0 X1) (k1\_tarski X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k3\_xtuple\_0 X0 X1 X2 = k4\_tarski (k4\_tarski X0 X1) X2 \quad (15)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmfsa\_2))) \Rightarrow \\
& (\forall X1.((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmfsa\_2))) \Rightarrow \\
& (\forall X2.(m1\_subset\_1 X2 (u1\_compos\_1 k1\_scmfsa\_2)) \Rightarrow ((X2 = \\
& k10\_scmfsa\_2 X0 X1) \Leftrightarrow (\exists X3.((v1\_ami\_2 X3) \wedge (m1\_subset\_1 \\
& X3 (u1\_struct\_0 k1\_ami\_3))) \wedge (\exists X4.((v1\_ami\_2 X4) \wedge (m1\_subset\_1 \\
& X4 (u1\_struct\_0 k1\_ami\_3)))) \wedge ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = k6\_ami\_3 \\
& X3 X4)))))))))
\end{aligned} \tag{16}$$

Assume the following.

$$\forall X0. \forall X1. k2\_tarSKI X0 X1 = k2\_tarSKI X1 X0 \tag{17}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \tag{18}$$

Assume the following.

$$\forall X0.(v5\_compos\_0 X0) \Rightarrow (\neg v1\_xboole\_0 X0) \tag{19}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmfsa\_2))) \Rightarrow \\
& (\forall X1.((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmfsa\_2))) \Rightarrow \\
& (k2\_compos\_0 (u1\_compos\_1 k1\_scmfsa\_2) (k10\_scmfsa\_2 X0 X1) = \\
& np\_5))
\end{aligned}$$