

# t24\_scmfsa\_1 (TMRqHM- NTBo3QbWUAFp4XcHePLdxkZoX2Z4H)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_card\_3 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_scmfsa\_1 : \iota$  be given. Let  $k5\_scmfsa\_1 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_scmfsa\_1 : \iota$  be given. Let  $k2\_scmfsa\_1 : \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_scmfsa\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v2\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_3 : \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. k1\_funct\_1 (k16\_funcop\_1 X0 X1) X0 = X1 \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. \\ & ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((X0 \in k9\_xtuple\_0 X1) \Rightarrow (k1\_funct\_1 \\ & (k1\_funct\_4 X2 X1) X0 = k1\_funct\_1 X1 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (k9\_xtuple\_0 (k2\_funcop\_1 X0 X1) = X0) \wedge (r1\_tarski (k10\_xtuple\_0 (k2\_funcop\_1 X0 X1)) (k1\_tarski X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k7\_funcop\_1 X0 X1 = k2\_funcop\_1 X0 X1 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. v1\_relat\_1 (k2\_zfmisc\_1 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge(v1\_funct\_1 X0))\Rightarrow(v4\_funct\_1 (k4\_card\_3 X0)) \quad (6)$$

Assume the following.

$$(v1\_relat\_1 (k3\_relat\_1 k4\_scmfsa\_1 k5\_scmfsa\_1))\wedge(v2\_relat\_1 (k3\_relat\_1 k4\_scmfsa\_1 k5\_scmfsa\_1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1 X0)\wedge(v1\_funct\_1 X0))\wedge((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1)))\Rightarrow((v1\_relat\_1 (k3\_relat\_1 X0 X1))\wedge(v1\_funct\_1 (k3\_relat\_1 X0 X1))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1 (k2\_funcop\_1 X0 X1))\wedge(v1\_funct\_1 (k2\_funcop\_1 X0 X1)) \quad (9)$$

Assume the following.

$$(v1\_relat\_1 k5\_scmfsa\_1)\wedge((v4\_relat\_1 k5\_scmfsa\_1 np\_3)\wedge(v1\_funct\_1 k5\_scmfsa\_1)\wedge(v1\_partfun1 k5\_scmfsa\_1 np\_3)) \quad (10)$$

Assume the following.

$$(v1\_funct\_1 k4\_scmfsa\_1)\wedge((v1\_funct\_2 k4\_scmfsa\_1 k1\_scmfsa\_1 np\_3)\wedge(m1\_subset\_1 k4\_scmfsa\_1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_scmfsa\_1 np\_3)))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1 X0 X1 = k7\_funcop\_1 (k1\_tarski X0) X1 \quad (12)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k4\_card\_3 (k3\_relat\_1 k4\_scmfsa\_1 k5\_scmfsa\_1)))\Rightarrow(\forall X1.(m2\_subset\_1 X1 k1\_scmfsa\_1 k2\_scmfsa\_1)\Rightarrow(\forall X2.(v1\_int\_1 X2)\Rightarrow(k7\_scmfsa\_1 X0 X1 X2 = k1\_funct\_4 X0 (k16\_funcop\_1 X1 X2)))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(X2 = X0)) \quad (14)$$

Assume the following.

$$\forall X0.(v4\_funct\_1 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1))) \quad (15)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0) \Rightarrow (v1\_relat\_1 X1))) \quad (16)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k4\_card\_3 (k3\_relat\_1 k4\_scmfsa\_1 \\ & k5\_scmfsa\_1))) \Rightarrow (\forall X1.(m2\_subset\_1 X1 k1\_scmfsa\_1 k2\_scmfsa\_1) \Rightarrow \\ & (\forall X2.(v1\_int\_1 X2) \Rightarrow (k1\_funct\_1 (k7\_scmfsa\_1 X0 X1 X2) X1 = \\ & X2))) \end{aligned}$$