

t4\_scmfsa\_i  
(TMdznvPtYaig5LfXvkqtG15LDxQUV79T2aG)

October 27, 2020

Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_scm\_inst : \iota$  be given. Let  $k1\_scmfsa\_i : \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_9 : \iota$  be given. Let  $np\_10 : \iota$  be given. Let  $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k11\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_scmfsa\_i : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $np\_13 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_scm\_inst : \iota$  be given. Let  $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_11 : \iota$  be given. Let  $np\_12 : \iota$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (\neg r1\_xxreal\_0 X1 X0))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_9) \wedge (m2\_subset\_1 np\_9 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_9 k5\_numbers) \wedge (m1\_subset\_1 np\_9 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_13) \wedge (m2\_subset\_1 np\_13 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_13 k5\_numbers) \wedge (m1\_subset\_1 np\_13 k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\neg v1\_xboole\_0 np\_13 \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_10) \wedge (m2\_subset\_1 \ np\_10 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_10 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_10 \ k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\neg r1\_xreal\_0 \ np\_13 \ np\_9 \quad (7)$$

Assume the following.

$$\neg r1\_xreal\_0 \ np\_13 \ np\_10 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 \ X0) \wedge ((\neg v1\_xboole\_0 \ X1) \wedge \\ & (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 \\ & \quad X2 \ X0 \ X1) \Leftrightarrow (m1\_subset\_1 \ X2 \ X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 \ X0) \Rightarrow (k7\_card\_1 \ X0 = k6\_card\_1 \ X0) \quad (10)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (11)$$

Assume the following.

$$(\neg v1\_xboole\_0 \ k4\_ordinal1) \wedge (v3\_ordinal1 \ k4\_ordinal1) \quad (12)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 \ X0) \Rightarrow (m1\_subset\_1 \ (k7\_card\_1 \ X0) \ (k1\_zfmisc\_1 \ k4\_ordinal1)) \quad (13)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 \ X0) \Rightarrow (k6\_card\_1 \ X0 = X0) \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. k4\_tarski \ X0 \ X1 = k2\_tarski \ (k2\_tarski \ X0 \ X1) \ (k1\_tarski \ X0) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k3\_xtuple\_0 \ X0 \ X1 \ X2 = k4\_tarski \ (k4\_tarski \ X0 \ X1) \ X2 \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_tarSKI X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \quad (18)$$

Assume the following.

$$\begin{aligned} & k2\_scmfSA\_i = k2\_xboole\_0 (k2\_xboole\_0 k3\_scm\_inst (ReplSep4 \\ & (toSet (\lambda X0 : \iota.m2\_subset\_1 X0 k4\_ordinal1 (k7\_card\_1 np\_13))) \\ & (\lambda X0 : \iota.toSet (\lambda X1 : \iota.m1\_subset\_1 X1 k2\_scm\_inst)) \\ & (\lambda X0 : \iota.\lambda X1 : \iota.toSet (\lambda X2 : \iota.m1\_subset\_1 X2 k2\_scm\_inst)) \\ & (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.toSet (\lambda X3 : \iota.m1\_subset\_1 \\ & X3 k1\_scmfSA\_i)) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\ & \iota.X0 \in k2\_tarSKI np\_9 np\_10) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\ & \iota.\lambda X3 : \iota.k3\_xtuple\_0 X0 k1\_xboole\_0 (k11\_finseq\_1 X1 X3 \\ & X2)))) (ReplSep3 (toSet (\lambda X0 : \iota.m2\_subset\_1 X0 k4\_ordinal1 \\ & (k7\_card\_1 np\_13))) (\lambda X0 : \iota.toSet (\lambda X1 : \iota.m1\_subset\_1 \\ & X1 k2\_scm\_inst)) (\lambda X0 : \iota.\lambda X1 : \iota.toSet (\lambda X2 : \iota. \\ & m1\_subset\_1 X2 k1\_scmfSA\_i)) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\ & \iota.X0 \in k2\_tarSKI np\_11 np\_12) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\ & \iota.k3\_xtuple\_0 X0 k1\_xboole\_0 (k10\_finseq\_1 X1 X2))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarSKI X0 X1 = k2\_tarSKI X1 X0 \quad (21)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (22)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.(m1\_subset\_1 X1 k2\_scm\_inst) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 k2\_scm\_inst) \Rightarrow (\forall X3.(m1\_subset\_1 X3 k1\_scmfSA\_i) \Rightarrow \\ & ((X0 \in k2\_tarSKI np\_9 np\_10) \Rightarrow (k3\_xtuple\_0 X0 k1\_xboole\_0 (k11\_finseq\_1 \\ & X1 X3 X2) \in k2\_scmfSA\_i)))) \end{aligned}$$