

t3\_scmringi  
(TMQVEskanRP5ouAdFRoLuXEA6k7JDJXm8Co)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k7\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_8 : \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_scmringi : \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k2\_scm\_inst : \iota$  be given. Let  $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_scmringi : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_scmringi : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k2\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k5\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 X0) \Rightarrow (k7\_partfun1 X0 (k12\_finseq\_1 X0 X1) np\_1 = X1)) \quad (1)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k2\_xtuple\_0 (k3\_xtuple\_0 X0 X1 X2) = X2 \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k5\_xtuple\_0 (k3\_xtuple\_0 X0 X1 X2) = X1 \quad (4)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \quad (5)$$

Assume the following.

$$\neg v1\_xboole\_0 k2\_scm\_inst \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \wedge \\ & (m1\_subset\_1 X1 (k1\_scmringi X0))) \Rightarrow (m1\_subset\_1 (k6\_scmringi \\ & X0 X1) k2\_scm\_inst) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_scmringi X0)) \Rightarrow ((\exists X2. (m1\_subset\_1 \\ & X2 k5\_numbers) \wedge (\exists X3. (m1\_subset\_1 X3 k2\_scm\_inst) \wedge (\exists X4. \\ & (m2\_subset\_1 X4 k4\_ordinal1 (k7\_card\_1 np\_8)) \wedge (X1 = k3\_xtuple\_0 \\ & X4 (k12\_finseq\_1 k5\_numbers X2) (k12\_finseq\_1 k2\_scm\_inst X3)))))) \Rightarrow \\ & (\forall X2. (m1\_subset\_1 X2 k2\_scm\_inst) \Rightarrow ((X2 = k6\_scmringi X0 \\ & X1) \Leftrightarrow (\exists X3. (m1\_subset\_1 X3 k2\_scm\_inst) \wedge ((k12\_finseq\_1 \\ & k2\_scm\_inst X3 = k2\_xtuple\_0 X1) \wedge (X2 = k7\_partfun1 k2\_scm\_inst \\ & (k12\_finseq\_1 k2\_scm\_inst X3) np\_1))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_scmringi X0)) \Rightarrow ((\exists X2. (m1\_subset\_1 \\ & X2 k5\_numbers) \wedge (\exists X3. (m1\_subset\_1 X3 k2\_scm\_inst) \wedge (\exists X4. \\ & (m2\_subset\_1 X4 k4\_ordinal1 (k7\_card\_1 np\_8)) \wedge (X1 = k3\_xtuple\_0 \\ & X4 (k12\_finseq\_1 k5\_numbers X2) (k12\_finseq\_1 k2\_scm\_inst X3)))))) \Rightarrow \\ & (\forall X2. (m1\_subset\_1 X2 k5\_numbers) \Rightarrow ((X2 = k5\_scmringi X0 \\ & X1) \Leftrightarrow (\exists X3. (m1\_subset\_1 X3 k5\_numbers) \wedge ((k12\_finseq\_1 \\ & k5\_numbers X3 = k5\_xtuple\_0 X1) \wedge (X2 = k7\_partfun1 k5\_numbers (k12\_finseq\_1 \\ & k5\_numbers X3) np\_1))))))))) \end{aligned} \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. (m2\_subset\_1 X0 k4\_ordinal1 (k7\_card\_1 np\_8)) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 X1) \wedge (l1\_struct\_0 X1)) \Rightarrow (\forall X2. (m1\_subset\_1 \\ & X2 (k1\_scmringi X1)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 k5\_numbers) \Rightarrow \\ & (\forall X4. (m1\_subset\_1 X4 k2\_scm\_inst) \Rightarrow ((X2 = k3\_xtuple\_0 X0 \\ & (k12\_finseq\_1 k5\_numbers X3) (k12\_finseq\_1 k2\_scm\_inst X4)) \Rightarrow \\ & ((k5\_scmringi X1 X2 = X3) \wedge (k6\_scmringi X1 X2 = X4))))))))) \end{aligned}$$