

# t7\_scmpds\_2 (TMFWewuJ- pLPCwd5zQeK2DibGM5WwBwoMwfj)

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Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_14 : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k9\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_scmpds\_i : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_numbers : \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k2\_scm\_inst : \iota$  be given. Let  $np\_1 : \iota$  be given. 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  $np\_15 : \iota$  be given. Let  $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $k11\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_4 : \iota$  be given. Let  $np\_5 : \iota$  be given. Let  $np\_6 : \iota$  be given. Let  $np\_7 : \iota$  be given. Let  $np\_8 : \iota$  be given. Let  $k7\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_9 : \iota$  be given. Let  $np\_10 : \iota$  be given. Let  $np\_11 : \iota$  be given. Let  $np\_12 : \iota$  be given. Let  $np\_13 : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. k9\_finseq\_1 X0 = k5\_finseq\_1 X0 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow (k12\_finseq\_1 X0 X1 = k5\_finseq\_1 X1) \quad (3)$$

Assume the following.

$$\neg v1\_xboole\_0 k4\_numbers \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Leftrightarrow (X0 \in k4\_numbers) \quad (6)$$

Assume the following.

$$\begin{aligned} & k1\_scmpds\_i = k2\_xboole\_0 (k2\_xboole\_0 (k2\_xboole\_0 (k2\_xboole\_0 \\ & (k2\_xboole\_0 (k1\_tarski (k3\_xtuple\_0 k6\_numbers k1\_xboole\_0 \\ & k1\_xboole\_0)) (ReplSep (toset (\lambda X0 : \iota.m1\_subset\_1 X0 k4\_numbers)) \\ & (\lambda X0 : \iota.True) (\lambda X0 : \iota.k3\_xtuple\_0 np\_14 k1\_xboole\_0 \\ & (k12\_finseq\_1 k4\_numbers X0)))) (ReplSep (toset (\lambda X0 : \iota. \\ & m1\_subset\_1 X0 k2\_scm\_inst)) (\lambda X0 : \iota.True) (\lambda X0 : \iota. \\ & k3\_xtuple\_0 np\_1 k1\_xboole\_0 (k12\_finseq\_1 k2\_scm\_inst X0)))) \\ & (ReplSep3 (toset (\lambda X0 : \iota.m2\_subset\_1 X0 k4\_ordinal1 (k7\_card\_1 \\ & np\_15))) (\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 k4\_numbers)) \\ & (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.X0 \in k2\_tarski np\_2 np\_3) \\ & (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.k3\_xtuple\_0 X0 k1\_xboole\_0 \\ & (k10\_finseq\_1 X1 X2)))) (ReplSep4 (toset (\lambda X0 : \iota.m2\_subset\_1 \\ & X0 k4\_ordinal1 (k7\_card\_1 np\_15))) (\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 k4\_numbers)) (\lambda X0 : \iota.\lambda X1 : \\ & \iota.\lambda X2 : \iota.toset (\lambda X3 : \iota.m1\_subset\_1 X3 k4\_numbers)) \\ & (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.X0 \in k3\_enumset1 \\ & np\_4 np\_5 np\_6 np\_7 np\_8) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\ & \iota.\lambda X3 : \iota.k3\_xtuple\_0 X0 k1\_xboole\_0 (k11\_finseq\_1 X1 X2 \\ & X3)))) (ReplSep5 (toset (\lambda X0 : \iota.m2\_subset\_1 X0 k4\_ordinal1 \\ & (k7\_card\_1 np\_15))) (\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 k4\_numbers)) (\lambda X0 : \iota. \\ & \lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.toset (\lambda X4 : \iota.m1\_subset\_1 \\ & X4 k4\_numbers)) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\ & \iota.\lambda X4 : \iota.X0 \in k3\_enumset1 np\_9 np\_10 np\_11 np\_12 np\_13) \\ & (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \iota. \\ & k3\_xtuple\_0 X0 k1\_xboole\_0 (k7\_finseq\_4 X1 X2 X3 X4))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (8)$$

**Theorem 1**

$$\forall X0.(v1\_int\_1 X0) \Rightarrow (k3\_xtuple\_0 np\_14 k1\_xboole\_0 (k9\_finseq\_1 X0) \in k1\_scmpds\_i)$$