

l29\_scmpds\_i (TMUDE-  
fvUy5Aa3S6Xn2LdMHpWSrkp6KXoWh9)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_scmpds\_i : \iota$  be given. Let  $k2\_compos\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k5\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k4\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_numbers : \iota$  be given. Let  $np\_14 : \iota$  be given. Let  $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k2\_scmpds\_i : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k7\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given.

Let  $v1\_compos\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 k1\_scmpds\_i) \Rightarrow (\neg(\neg(X0 \in k1\_tarski ( \\
& k3\_xtuple\_0 k6\_numbers k1\_xboole\_0 k1\_xboole\_0)) \wedge (k4\_xtuple\_0 \\
& X0 = k6\_numbers)) \wedge ((\neg(X0 \in ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 \\
& X1 k4\_numbers)) (\lambda X1 : \iota.True) (\lambda X1 : \iota.k3\_xtuple\_0 np\_14 \\
& k1\_xboole\_0 (k12\_finseq\_1 k4\_numbers X1))) \wedge (k4\_xtuple\_0 X0 = \\
& np\_14)) \wedge ((\neg(X0 \in ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 X1 k2\_scm\_inst)) \\
& (\lambda X1 : \iota.True) (\lambda X1 : \iota.k3\_xtuple\_0 np\_1 k1\_xboole\_0 \\
& (k12\_finseq\_1 k2\_scm\_inst X1))) \wedge (k4\_xtuple\_0 X0 = np\_1)) \wedge (( \\
& \neg(X0 \in ReplSep3 (toset (\lambda X1 : \iota.m2\_subset\_1 X1 k4\_ordinal1 \\
& (k7\_card\_1 np\_15))) (\lambda X1 : \iota.toset (\lambda X2 : \iota.m1\_subset\_1 \\
& X2 k2\_scm\_inst)) (\lambda X1 : \iota.\lambda X2 : \iota.toset (\lambda X3 : \iota. \\
& m1\_subset\_1 X3 k4\_numbers)) (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\
& \iota.X1 \in k2\_tarski np\_2 np\_3) (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\
& \iota.k3\_xtuple\_0 X1 k1\_xboole\_0 (k2\_scmpds\_i X2 X3))) \wedge ((k4\_xtuple\_0 \\
& X0 = np\_2) \vee (k4\_xtuple\_0 X0 = np\_3))) \wedge ((\neg(X0 \in ReplSep4 (toset \\
& (\lambda X1 : \iota.m2\_subset\_1 X1 k4\_ordinal1 (k7\_card\_1 np\_15))) \\
& (\lambda X1 : \iota.toset (\lambda X2 : \iota.m1\_subset\_1 X2 k2\_scm\_inst)) \\
& (\lambda X1 : \iota.\lambda X2 : \iota.toset (\lambda X3 : \iota.m1\_subset\_1 X3 k4\_numbers)) \\
& (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.toset (\lambda X4 : \iota.m1\_subset\_1 \\
& X4 k4\_numbers)) (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \\
& \iota.X1 \in k3\_enumset1 np\_4 np\_5 np\_6 np\_7 np\_8) (\lambda X1 : \iota. \\
& \lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \iota.k3\_xtuple\_0 X1 k1\_xboole\_0 \\
& (k11\_finseq\_1 X2 X3 X4))) \wedge (\neg(k4\_xtuple\_0 X0 \neq np\_4) \wedge ((k4\_xtuple\_0 \\
& X0 \neq np\_5) \wedge ((k4\_xtuple\_0 X0 \neq np\_6) \wedge ((k4\_xtuple\_0 X0 \neq np\_7) \wedge \\
& (k4\_xtuple\_0 X0 \neq np\_8)))))) \wedge (\neg(X0 \in ReplSep5 (toset (\lambda X1 : \\
& \iota.m2\_subset\_1 X1 k4\_ordinal1 (k7\_card\_1 np\_15))) (\lambda X1 : \\
& \iota.toset (\lambda X2 : \iota.m1\_subset\_1 X2 k2\_scm\_inst)) (\lambda X1 : \\
& \iota.\lambda X2 : \iota.toset (\lambda X3 : \iota.m1\_subset\_1 X3 k2\_scm\_inst)) \\
& (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.toset (\lambda X4 : \iota.m1\_subset\_1 \\
& X4 k4\_numbers)) (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \\
& \iota.toset (\lambda X5 : \iota.m1\_subset\_1 X5 k4\_numbers)) (\lambda X1 : \iota. \\
& \lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \iota.\lambda X5 : \iota.X1 \in k3\_enumset1 \\
& np\_9 np\_10 np\_11 np\_12 np\_13) (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\
& \iota.\lambda X4 : \iota.\lambda X5 : \iota.k3\_xtuple\_0 X1 k1\_xboole\_0 (k7\_finseq\_4 \\
& X2 X3 X4 X5))) \wedge (\neg(k4\_xtuple\_0 X0 \neq np\_9) \wedge ((k4\_xtuple\_0 X0 \neq np\_10) \wedge \\
& ((k4\_xtuple\_0 X0 \neq np\_11) \wedge ((k4\_xtuple\_0 X0 \neq np\_12) \wedge (k4\_xtuple\_0 \\
& X0 \neq np\_13)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(((\neg v1\_xboole\_0 X0) \wedge (v1\_compos\_0 X0)) \wedge \\
& (m1\_subset\_1 X1 X0)) \Rightarrow (k2\_compos\_0 X0 X1 = k4\_xtuple\_0 X1)
\end{aligned} \tag{3}$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_scmpds\_i) \Rightarrow ((k2\_compos\_0 k1\_scmpds\_i X0 = np\_1) \Rightarrow (k5\_xtuple\_0 X0 = k1\_xboole\_0)) \quad (5)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_scmpds\_i) \Rightarrow ((k2\_compos\_0 k1\_scmpds\_i X0 = k6\_numbers) \Rightarrow (k5\_xtuple\_0 X0 = k1\_xboole\_0)) \quad (6)$$

Assume the following.

$$v1\_compos\_0 k1\_scmpds\_i \quad (7)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_scmpds\_i \quad (8)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k1\_scmpds\_i) \Rightarrow ((\neg(k2\_compos\_0 k1\_scmpds\_i X0 \neq np\_4) \wedge ((k2\_compos\_0 k1\_scmpds\_i X0 \neq np\_5) \wedge ((k2\_compos\_0 k1\_scmpds\_i X0 \neq np\_6) \wedge ((k2\_compos\_0 k1\_scmpds\_i X0 \neq np\_7) \wedge (k2\_compos\_0 k1\_scmpds\_i X0 \neq np\_8)))))) \Rightarrow (k5\_xtuple\_0 X0 = k1\_xboole\_0))$$