

## t79\_scmpds\_2

(TMWN6o5MCGUZcv9jGt5SqxFW9YhAgQFwPCJ)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_compos\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_scmpds\_2 : \iota$  be given. Let  $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $k3\_scmpds\_2 : \iota \Rightarrow \iota$  be given. Let  $v1\_ami\_2 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_scmpds\_2 : \iota \Rightarrow \iota$  be given. Let  $k6\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k14\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k15\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_compos\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_13 : \iota$  be given. Let  $np\_12 : \iota$  be given. Let  $np\_11 : \iota$  be given. Let  $np\_10 : \iota$  be given. Let  $np\_9 : \iota$  be given. Let  $np\_8 : \iota$  be given. Let  $np\_7 : \iota$  be given. Let  $np\_6 : \iota$  be given. Let  $np\_5 : \iota$  be given. Let  $np\_4 : \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $np\_14 : \iota$  be given. Let  $k2\_compos\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_ami\_3 : \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k4\_numbers : \iota$  be given. Let  $k9\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_ami\_2 : \iota$  be given. Let  $k2\_ami\_2 : \iota$  be given. Let  $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_15 : \iota$  be given. Let  $k3\_scmpds\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow & (\neg(k2\_compos\_0 \\
 & (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_13) \wedge (\forall X1.((v1\_ami\_2 \\
 & X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2)))) \Rightarrow (\forall X2. \\
 & ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 k1\_scmpds\_2)))) \Rightarrow \\
 & (\forall X3.(v1\_int\_1 X3) \Rightarrow (\forall X4.(v1\_int\_1 X4) \Rightarrow (X0 \neq k16\_scmpds\_2 \\
 & X1 X2 X3 X4)))))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\
& \quad (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_12) \wedge (\forall X1.((v1\_ami\_2 \\
& \quad X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\
& \quad ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& \quad (\forall X3.(v1\_int\_1 X3) \Rightarrow (\forall X4.(v1\_int\_1 X4) \Rightarrow (X0 \neq k15\_scmpds\_2 \\
& \quad X1 X2 X3 X4))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\
& \quad (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_11) \wedge (\forall X1.((v1\_ami\_2 \\
& \quad X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\
& \quad ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& \quad (\forall X3.(v1\_int\_1 X3) \Rightarrow (\forall X4.(v1\_int\_1 X4) \Rightarrow (X0 \neq k14\_scmpds\_2 \\
& \quad X1 X2 X3 X4))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\
& \quad (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_10) \wedge (\forall X1.((v1\_ami\_2 \\
& \quad X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\
& \quad ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& \quad (\forall X3.(v1\_int\_1 X3) \Rightarrow (\forall X4.(v1\_int\_1 X4) \Rightarrow (X0 \neq k13\_scmpds\_2 \\
& \quad X1 X2 X3 X4))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\
& \quad (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_9) \wedge (\forall X1.((v1\_ami\_2 \\
& \quad X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\
& \quad ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& \quad (\forall X3.(v1\_int\_1 X3) \Rightarrow (\forall X4.(v1\_int\_1 X4) \Rightarrow (X0 \neq k12\_scmpds\_2 \\
& \quad X1 X2 X3 X4))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\
& \quad (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_8) \wedge (\forall X1.((v1\_ami\_2 \\
& \quad X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\
& \quad (v1\_int\_1 X2) \Rightarrow (\forall X3.(v1\_int\_1 X3) \Rightarrow (X0 \neq k11\_scmpds\_2 X1 \\
& \quad X2 X3))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\
& \quad (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_7) \wedge (\forall X1.((v1\_ami\_2 \\
& \quad X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\
& \quad (v1\_int\_1 X2) \Rightarrow (\forall X3.(v1\_int\_1 X3) \Rightarrow (X0 \neq k10\_scmpds\_2 X1 \\
& \quad X2 X3))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\ (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_6) \wedge (\forall X1.((v1\_ami\_2 \\ X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\ (v1\_int\_1 X2) \Rightarrow (\forall X3.(v1\_int\_1 X3) \Rightarrow (X0 \neq k9\_scmpds\_2 X1 X2 \\ X3)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\ (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_5) \wedge (\forall X1.((v1\_ami\_2 \\ X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\ (v1\_int\_1 X2) \Rightarrow (\forall X3.(v1\_int\_1 X3) \Rightarrow (X0 \neq k8\_scmpds\_2 X1 X2 \\ X3)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\ (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_4) \wedge (\forall X1.((v1\_ami\_2 \\ X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\ (v1\_int\_1 X2) \Rightarrow (\forall X3.(v1\_int\_1 X3) \Rightarrow (X0 \neq k7\_scmpds\_2 X1 X2 \\ X3)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\ (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_3) \wedge (\forall X1.((v1\_ami\_2 \\ X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\ (v1\_int\_1 X2) \Rightarrow (X0 \neq k6\_scmpds\_2 X1 X2)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\ (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_2) \wedge (\forall X1.((v1\_ami\_2 \\ X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. \\ (v1\_int\_1 X2) \Rightarrow (X0 \neq k5\_scmpds\_2 X1 X2)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\ (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_1) \wedge (\forall X1.((v1\_ami\_2 \\ X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (X0 \neq k4\_scmpds\_2 \\ X1))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(k2\_compos\_0 \\ (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_14) \wedge (\forall X1.(v1\_int\_1 \\ X1) \Rightarrow (X0 \neq k3\_scmpds\_2 X1))) \end{aligned} \quad (14)$$

Assume the following.

$$k2\_compos\_1 \ k1\_ami\_3 = k3\_xtuple\_0 \ k6\_numbers \ k1\_xboole\_0 \ k1\_xboole\_0 \quad (15)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 \ X0 \ (u1\_compos\_1 \ k1\_scmpds\_2)) \Rightarrow (\neg(\neg X0 \in \\ & \quad k1\_tarski \ (k3\_xtuple\_0 \ k6\_numbers \ k1\_xboole\_0 \ k1\_xboole\_0)) \wedge \\ & \quad ((\neg X0 \in \text{ReplSep} \ (\text{toset} \ (\lambda X1 : \iota.m1\_subset\_1 \ X1 \ k4\_numbers)) \\ & \quad (\lambda X1 : \iota.True) \ (\lambda X1 : \iota.k3\_xtuple\_0 \ np\_14 \ k1\_xboole\_0 \\ & \quad (k9\_finseq\_1 \ X1)))) \wedge ((\neg X0 \in \text{ReplSep} \ (\text{toset} \ (\lambda X1 : \iota.m2\_subset\_1 \\ & \quad X1 \ k1\_ami\_2 \ k2\_ami\_2)) \ (\lambda X1 : \iota.True) \ (\lambda X1 : \iota.k3\_xtuple\_0 \\ & \quad np\_1 \ k1\_xboole\_0 \ (k12\_finseq\_1 \ k2\_ami\_2 \ X1))) \wedge ((\neg X0 \in \text{ReplSep3} \\ & \quad (\text{toset} \ (\lambda X1 : \iota.m1\_subset\_1 \ X1 \ (k7\_card\_1 \ np\_15)))) \ (\lambda X1 : \\ & \quad \iota.\text{toset} \ (\lambda X2 : \iota.m2\_subset\_1 \ X2 \ k1\_ami\_2 \ k2\_ami\_2)) \ (\lambda X1 : \\ & \quad \iota.\lambda X2 : \iota.\text{toset} \ (\lambda X3 : \iota.m1\_subset\_1 \ X3 \ k4\_numbers)) \\ & \quad (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.X1 \in k2\_tarski \ np\_2 \ np\_3) \\ & \quad (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.k3\_xtuple\_0 \ X1 \ k1\_xboole\_0 \\ & \quad (k3\_scmpds\_1 \ X2 \ X3))) \wedge ((\neg X0 \in \text{ReplSep4} \ (\text{toset} \ (\lambda X1 : \iota.m1\_subset\_1 \\ & \quad X1 \ (k7\_card\_1 \ np\_15)))) \ (\lambda X1 : \iota.\text{toset} \ (\lambda X2 : \iota.m2\_subset\_1 \\ & \quad X2 \ k1\_ami\_2 \ k2\_ami\_2)) \ (\lambda X1 : \iota.\lambda X2 : \iota.\text{toset} \ (\lambda X3 : \\ & \quad \iota.m1\_subset\_1 \ X3 \ k4\_numbers)) \ (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\ & \quad \iota.\text{toset} \ (\lambda X4 : \iota.m1\_subset\_1 \ X4 \ k4\_numbers)) \ (\lambda X1 : \iota. \\ & \quad \lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \iota.X1 \in k3\_enumset1 \ np\_4 \ np\_5 \\ & \quad np\_6 \ np\_7 \ np\_8) \ (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \\ & \quad \iota.k3\_xtuple\_0 \ X1 \ k1\_xboole\_0 \ (k11\_finseq\_1 \ X2 \ X3 \ X4))) \wedge (\neg X0 \in \\ & \quad \text{ReplSep5} \ (\text{toset} \ (\lambda X1 : \iota.m1\_subset\_1 \ X1 \ (k7\_card\_1 \ np\_15)))) \\ & \quad (\lambda X1 : \iota.\text{toset} \ (\lambda X2 : \iota.m2\_subset\_1 \ X2 \ k1\_ami\_2 \ k2\_ami\_2)) \\ & \quad (\lambda X1 : \iota.\lambda X2 : \iota.\text{toset} \ (\lambda X3 : \iota.m2\_subset\_1 \ X3 \ k1\_ami\_2 \\ & \quad k2\_ami\_2)) \ (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.\text{toset} \ (\lambda X4 : \\ & \quad \iota.m1\_subset\_1 \ X4 \ k4\_numbers)) \ (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\ & \quad \iota.\lambda X4 : \iota.\text{toset} \ (\lambda X5 : \iota.m1\_subset\_1 \ X5 \ k4\_numbers)) \\ & \quad (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \iota.\lambda X5 : \iota. \\ & \quad X1 \in k3\_enumset1 \ np\_9 \ np\_10 \ np\_11 \ np\_12 \ np\_13) \ (\lambda X1 : \iota. \\ & \quad \lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \iota.\lambda X5 : \iota.k3\_xtuple\_0 \\ & \quad X1 \ k1\_xboole\_0 \ (k7\_finseq\_4 \ X2 \ X3 \ X4 \ X5))))))))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(X0 \in \\
& \text{ReplSep5} (tosest (\lambda X1 : \iota.m1\_subset\_1 X1 (k7\_card\_1 np\_15)))) \\
& (\lambda X1 : \iota.tosest (\lambda X2 : \iota.m2\_subset\_1 X2 k1\_ami\_2 k2\_ami\_2)) \\
& (\lambda X1 : \iota.\lambda X2 : \iota.tosest (\lambda X3 : \iota.m2\_subset\_1 X3 k1\_ami\_2 \\
& \quad k2\_ami\_2)) (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.tosest (\lambda X4 : \\
& \quad \iota.m1\_subset\_1 X4 k4\_numbers)) (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\
& \quad \iota.\lambda X4 : \iota.tosest (\lambda X5 : \iota.m1\_subset\_1 X5 k4\_numbers)) \\
& \quad (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \iota.\lambda X5 : \iota. \\
& \quad X1 \in k3\_enumset1 np\_9 np\_10 np\_11 np\_12 np\_13) (\lambda X1 : \iota. \\
& \quad \lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \iota.\lambda X5 : \iota.k3\_xtuple\_0 \\
& X1 k1\_xboole\_0 (k7\_finseq\_4 X2 X3 X4 X5))) \wedge ((k2\_compos\_0 (u1\_compos\_1 \\
& k1\_scmpds\_2) X0 \neq np\_9) \wedge ((k2\_compos\_0 (u1\_compos\_1 k1\_scmpds\_2) \\
& X0 \neq np\_10) \wedge ((k2\_compos\_0 (u1\_compos\_1 k1\_scmpds\_2) X0 \neq np\_11) \wedge \\
& ((k2\_compos\_0 (u1\_compos\_1 k1\_scmpds\_2) X0 \neq np\_12) \wedge (k2\_compos\_0 \\
& (u1\_compos\_1 k1\_scmpds\_2) X0 \neq np\_13))))))
\end{aligned} \tag{18}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(X0 \in \\
& \text{ReplSep4} (tosest (\lambda X1 : \iota.m1\_subset\_1 X1 (k7\_card\_1 np\_15)))) \\
& (\lambda X1 : \iota.tosest (\lambda X2 : \iota.m2\_subset\_1 X2 k1\_ami\_2 k2\_ami\_2)) \\
& (\lambda X1 : \iota.\lambda X2 : \iota.tosest (\lambda X3 : \iota.m1\_subset\_1 X3 k4\_numbers)) \\
& (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.tosest (\lambda X4 : \iota.m1\_subset\_1 \\
& \quad X4 k4\_numbers)) (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \\
& \quad \iota.X1 \in k3\_enumset1 np\_4 np\_5 np\_6 np\_7 np\_8) (\lambda X1 : \iota. \\
& \quad \lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \iota.k3\_xtuple\_0 X1 k1\_xboole\_0 \\
& (k11\_finseq\_1 X2 X3 X4))) \wedge ((k2\_compos\_0 (u1\_compos\_1 k1\_scmpds\_2) \\
& X0 \neq np\_4) \wedge ((k2\_compos\_0 (u1\_compos\_1 k1\_scmpds\_2) X0 \neq np\_5) \wedge \\
& ((k2\_compos\_0 (u1\_compos\_1 k1\_scmpds\_2) X0 \neq np\_6) \wedge ((k2\_compos\_0 \\
& (u1\_compos\_1 k1\_scmpds\_2) X0 \neq np\_7) \wedge (k2\_compos\_0 (u1\_compos\_1 \\
& k1\_scmpds\_2) X0 \neq np\_8))))))
\end{aligned} \tag{19}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\neg(X0 \in \\
& \text{ReplSep3} (tosest (\lambda X1 : \iota.m1\_subset\_1 X1 (k7\_card\_1 np\_15)))) \\
& (\lambda X1 : \iota.tosest (\lambda X2 : \iota.m2\_subset\_1 X2 k1\_ami\_2 k2\_ami\_2)) \\
& (\lambda X1 : \iota.\lambda X2 : \iota.tosest (\lambda X3 : \iota.m1\_subset\_1 X3 k4\_numbers)) \\
& (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.X1 \in k2\_tarski np\_2 np\_3) \\
& (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.k3\_xtuple\_0 X1 k1\_xboole\_0 \\
& (k3\_scmpds\_1 X2 X3))) \wedge ((k2\_compos\_0 (u1\_compos\_1 k1\_scmpds\_2) \\
& X0 \neq np\_2) \wedge (k2\_compos\_0 (u1\_compos\_1 k1\_scmpds\_2) X0 \neq np\_3))
\end{aligned} \tag{20}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow ((X0 \in \\ ReplSep (toset (\lambda X1 : \iota.m2\_subset\_1 X1 k1\_ami\_2 k2\_ami\_2)) \\ (\lambda X1 : \iota.True) (\lambda X1 : \iota.k3\_xtuple\_0 np\_1 k1\_xboole\_0 \\ (k12\_finseq\_1 k2\_ami\_2 X1))) \Rightarrow (k2\_compos\_0 (u1\_compos\_1 k1\_scmpds\_2) \\ X0 = np\_1)) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow ((X0 \in \\ ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 X1 k4\_numbers)) (\lambda X1 : \\ \iota.True) (\lambda X1 : \iota.k3\_xtuple\_0 np\_14 k1\_xboole\_0 (k9\_finseq\_1 \\ X1))) \Rightarrow (k2\_compos\_0 (u1\_compos\_1 k1\_scmpds\_2) X0 = np\_14)) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.k3\_xtuple\_0 X0 X1 X2 = k4\_tarSKI \\ (k4\_tarSKI X0 X1) X2 \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(X1 = k1\_tarSKI X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow \\ (X2 = X0)) \end{aligned} \quad (24)$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. \neg(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \wedge ((X0 \neq \\
& \quad k3\_xtuple\_0 k6\_numbers k1\_xboole\_0 k1\_xboole\_0) \wedge ((\forall X1. \\
& \quad (v1\_int\_1 X1) \Rightarrow (X0 \neq k3\_scmpds\_2 X1)) \wedge ((\forall X1. ((v1\_ami\_2 \\
X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (X0 \neq k4\_scmpds\_2 \\
& \quad X1)) \wedge ((\forall X1. ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 \\
& \quad k1\_scmpds\_2))) \Rightarrow (\forall X2. (v1\_int\_1 X2) \Rightarrow (X0 \neq k6\_scmpds\_2 X1 \\
& \quad X2))) \wedge ((\forall X1. ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 \\
& \quad k1\_scmpds\_2))) \Rightarrow (\forall X2. (v1\_int\_1 X2) \Rightarrow (X0 \neq k5\_scmpds\_2 X1 \\
& \quad X2))) \wedge ((\forall X1. ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 \\
& \quad k1\_scmpds\_2))) \Rightarrow (\forall X2. (v1\_int\_1 X2) \Rightarrow (\forall X3. (v1\_int\_1 \\
& \quad X3) \Rightarrow (X0 \neq k10\_scmpds\_2 X1 X2 X3))) \wedge ((\forall X1. ((v1\_ami\_2 X1) \wedge \\
& \quad (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. (v1\_int\_1 \\
& \quad X2) \Rightarrow (\forall X3. (v1\_int\_1 X3) \Rightarrow (X0 \neq k7\_scmpds\_2 X1 X2 X3))) \wedge ( \\
& \quad (\forall X1. ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& \quad (\forall X2. (v1\_int\_1 X2) \Rightarrow (\forall X3. (v1\_int\_1 X3) \Rightarrow (X0 \neq k8\_scmpds\_2 \\
& \quad X1 X2 X3))) \wedge ((\forall X1. ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 \\
& \quad k1\_scmpds\_2))) \Rightarrow (\forall X2. (v1\_int\_1 X2) \Rightarrow (\forall X3. (v1\_int\_1 \\
& \quad X3) \Rightarrow (X0 \neq k9\_scmpds\_2 X1 X2 X3))) \wedge ((\forall X1. ((v1\_ami\_2 X1) \wedge \\
& \quad (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. ((v1\_ami\_2 \\
& \quad X2) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X3. \\
& \quad (v1\_int\_1 X3) \Rightarrow (\forall X4. (v1\_int\_1 X4) \Rightarrow (X0 \neq k11\_scmpds\_2 X1 \\
& \quad X3 X4)))) \wedge ((\forall X1. ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 \\
& \quad k1\_scmpds\_2))) \Rightarrow (\forall X2. ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 X2 ( \\
& \quad u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X3. (v1\_int\_1 X3) \Rightarrow (\forall X4. \\
& \quad (v1\_int\_1 X4) \Rightarrow (X0 \neq k12\_scmpds\_2 X1 X2 X3 X4)))) \wedge ((\forall X1. \\
& \quad ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& \quad (\forall X2. ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& \quad (\forall X3. (v1\_int\_1 X3) \Rightarrow (\forall X4. (v1\_int\_1 X4) \Rightarrow (X0 \neq k13\_scmpds\_2 \\
& \quad X1 X2 X3 X4)))) \wedge ((\forall X1. ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 ( \\
& \quad u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X2. ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 \\
& \quad X2 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X3. (v1\_int\_1 X3) \Rightarrow (\forall X4. \\
& \quad (v1\_int\_1 X4) \Rightarrow (X0 \neq k14\_scmpds\_2 X1 X2 X3 X4)))) \wedge ((\forall X1. \\
& \quad ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& \quad (\forall X2. ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& \quad (\forall X3. (v1\_int\_1 X3) \Rightarrow (\forall X4. (v1\_int\_1 X4) \Rightarrow (X0 \neq k15\_scmpds\_2 \\
& \quad X1 X2 X3 X4)))) \wedge (\forall X1. ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 \\
& \quad k1\_scmpds\_2))) \Rightarrow (\forall X2. ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 X2 ( \\
& \quad u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X3. (v1\_int\_1 X3) \Rightarrow (\forall X4. \\
& \quad (v1\_int\_1 X4) \Rightarrow (X0 \neq k16\_scmpds\_2 X1 X2 X3 X4))))))))))))))
\end{aligned}$$