

## t8\_scmpds\_9

(TMbWZ9PHqpAPPn1qmdDqjBNijTCdmX85Svp)

October 27, 2020

Let  $v1\_ami\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_scmpds\_2 : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $k1\_amistd\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k16\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k1\_ordinal1 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v5\_funct\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_scmpds\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_compos\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 (u1\_struct\_0 k1\_scmpds\_2)) \wedge \\
 & ((v1\_funct\_1 X0) \wedge ((v5\_funct\_1 X0 (k2\_memstr\_0 np\_2 k1\_scmpds\_2)) \wedge \\
 & (v1\_partfun1 X0 (u1\_struct\_0 k1\_scmpds\_2)))))) \Rightarrow (\forall X1. \\
 & (v1\_int\_1 X1) \Rightarrow (\forall X2. (v1\_int\_1 X2) \Rightarrow (\forall X3. ((v1\_ami\_2 \\
 & X3) \wedge (m1\_subset\_1 X3 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow (\forall X4. \\
 & ((v1\_ami\_2 X4) \wedge (m1\_subset\_1 X4 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
 & ((k1\_funct\_1 (k2\_extpro\_1 np\_2 k1\_scmpds\_2 (k16\_scmpds\_2 X3 \\
 & X4 X1 X2) X0) (k4\_struct\_0 k1\_scmpds\_2) = k4\_card\_1 (k5\_memstr\_0 \\
 & np\_2 k1\_scmpds\_2 X0)) \wedge ((k1\_funct\_1 (k2\_extpro\_1 np\_2 k1\_scmpds\_2 \\
 & (k16\_scmpds\_2 X3 X4 X1 X2) X0) (k2\_scmpds\_2 (k1\_funct\_1 X0 X3) X1) = \\
 & k1\_funct\_1 X0 (k2\_scmpds\_2 (k1\_funct\_1 X0 X4) X2)) \wedge (\forall X5. \\
 & ((v1\_ami\_2 X5) \wedge (m1\_subset\_1 X5 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
 & ((X5 \neq k2\_scmpds\_2 (k1\_funct\_1 X0 X3) X1) \Rightarrow (k1\_funct\_1 (k2\_extpro\_1 \\
 & np\_2 k1\_scmpds\_2 (k16\_scmpds\_2 X3 X4 X1 X2) X0) X5 = k1\_funct\_1 X0 \\
 & X5)))))))))
 \end{aligned}$$

(1)

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmpds\_2)) \Rightarrow (\forall X1. \\
& (m1\_subset\_1 X1 k5\_numbers) \Rightarrow ((\forall X2.((v1\_relat\_1 X2) \wedge ( \\
& (v4\_relat\_1 X2 (u1\_struct\_0 k1\_scmpds\_2)) \wedge ((v1\_funct\_1 X2) \wedge \\
& ((v5\_funct\_1 X2 (k2\_memstr\_0 np\_2 k1\_scmpds\_2)) \wedge (v1\_partfun1 \\
& X2 (u1\_struct\_0 k1\_scmpds\_2)))))) \Rightarrow ((k5\_memstr\_0 np\_2 k1\_scmpds\_2 \\
& X2 = X1) \Rightarrow (k1\_funct\_1 (k2\_extpro\_1 np\_2 k1\_scmpds\_2 X0 X2) (k4\_struct\_0 \\
& k1\_scmpds\_2) = k1\_ordinal1 (k5\_memstr\_0 np\_2 k1\_scmpds\_2 X2))) \Rightarrow \\
& (k1\_amistd\_1 np\_2 k1\_scmpds\_2 X1 X0 = k1\_tarski (k1\_ordinal1 X1)))) \\
& \tag{2}
\end{aligned}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (k4\_card\_1 X0 = k1\_ordinal1 X0) \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((v1\_ami\_2 X0) \wedge \\
& (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmpds\_2))) \wedge (((v1\_ami\_2 X1) \wedge \\
& (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \wedge ((v1\_int\_1 X2) \wedge \\
& (v1\_int\_1 X3)))) \Rightarrow (m1\_subset\_1 (k16\_scmpds\_2 X0 X1 X2 X3) (u1\_compos\_1 \\
& k1\_scmpds\_2)) \\
& \tag{5}
\end{aligned}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \tag{6}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& (\forall X1.(((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmpds\_2))) \Rightarrow \\
& (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow (\forall X3.(v1\_int\_1 \\
& X3) \Rightarrow (\forall X4.(v1\_int\_1 X4) \Rightarrow (k1\_amistd\_1 np\_2 k1\_scmpds\_2 \\
& X2 (k16\_scmpds\_2 X0 X1 X3 X4) = k1\_tarski (k1\_ordinal1 X2)))))))
\end{aligned}$$