

t17\_cantor\_1  
(TMbdChLP6jhGWoH29scC1M85gXe67bhewTi)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v1\_tops\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_cantor\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_cantor\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_pre\_topc : \iota \Rightarrow \iota$  be given. Let  $k2\_cantor\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_cantor\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $g1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow ((r1\_tarski X1 X2) \Rightarrow (r1\_tarski (k1\_cantor\_1 X0 X1) (k1\_cantor\_1 \\ & X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (u1\_pre\_topc X0 = k1\_cantor\_1 (u1\_struct\_0 X0) (k2\_cantor\_1 \\ & (u1\_struct\_0 X0) (u1\_pre\_topc X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((v1\_tops\_2 X1 X0) \Leftrightarrow (r1\_tarski \\ & X1 (u1\_pre\_topc X0)))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski \\ & X1 X2)) \Rightarrow (r1\_tarski X0 X2) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow ((r1\_tarski X1 X2) \Rightarrow (r1\_tarski (k2\_cantor\_1 X0 X1) (k2\_cantor\_1 \\ & X0 X2)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (m1\_subset\_1 (u1\_pre\_topc X0) (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow (m1\_subset\_1 (k2\_cantor\_1 X0 X1) (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((v2\_cantor\_1 X1 X0) \Leftrightarrow (\exists X2. \\ & ((v1\_tops\_2 X2 X0) \wedge ((v1\_cantor\_1 X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \wedge (r1\_tarski X2 (k2\_cantor\_1 \\ & (u1\_struct\_0 X0) X1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((v1\_cantor\_1 X1 X0) \Leftrightarrow (r1\_tarski \\ & (u1\_pre\_topc X0) (k1\_cantor\_1 (u1\_struct\_0 X0) X1)))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \quad (10)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow ((v1\_pre\_topc X0) \Rightarrow (X0 = g1\_pre\_topc (u1\_struct\_0 X0) (u1\_pre\_topc X0))) \quad (11)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v1\_pre\_topc X0) \wedge ((v2\_pre\_topc \\ & X0) \wedge (l1\_pre\_topc X0)))) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v1\_pre\_topc \\ & X1) \wedge ((v2\_pre\_topc X1) \wedge (l1\_pre\_topc X1)))) \Rightarrow (\forall X2. ((v1\_tops\_2 \\ & X2 X0) \wedge ((v2\_cantor\_1 X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))))) \Rightarrow (((u1\_struct\_0 X0 = u1\_struct\_0 X1) \wedge (( \\ & v1\_tops\_2 X2 X1) \wedge ((v2\_cantor\_1 X2 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 (u1\_struct\_0 X1))))))))) \Rightarrow (X0 = X1))) \end{aligned}$$