

## t5\_yellow\_9

(TMbEs1APfXnNVWbvRexqmQgZeLkXtRDU4kH)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  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  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k7\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Let  $k3\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(l1\_struct\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow (k8\_setfam\_1 (u1\_struct\_0 \\ X0) (k7\_setfam\_1 (u1\_struct\_0 X0) X1) = k3\_subset\_1 (u1\_struct\_0 \\ X0) (k5\_setfam\_1 (u1\_struct\_0 X0) X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((k4\_waybel\_0 \\ X0 X1 = k3\_tarski (ReplSep (toset (\lambda X2 : \iota.m1\_subset\_1 X2 (u1\_struct\_0 \\ X0))) (\lambda X2 : \iota.X2 \in X1) (\lambda X2 : \iota.k6\_waybel\_0 X0 X2)))) \wedge ( \\ k3\_waybel\_0 X0 X1 = k3\_tarski (ReplSep (toset (\lambda X2 : \iota.m1\_subset\_1 \\ X2 (u1\_struct\_0 X0))) (\lambda X2 : \iota.X2 \in X1) (\lambda X2 : \iota.k5\_waybel\_0 \\ X0 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1 : \iota \Rightarrow \iota.\forall X2.\forall X3.(((\neg v2\_struct\_0 \\ X3) \wedge (l1\_orders\_2 X3)) \wedge ((m1\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X3)))) \wedge (\forall X4.m1\_subset\_1 (X1 X4) (k1\_zfmisc\_1 \\ (u1\_struct\_0 X3)))))) \Rightarrow ((X2 = ReplSep (toset (\lambda X4 : \iota.m1\_subset\_1 \\ X4 (u1\_struct\_0 X3))) (\lambda X4 : \iota.X4 \in X0) (\lambda X4 : \iota.k3\_subset\_1 \\ (u1\_struct\_0 X3) (X1 X4))) \Rightarrow (k7\_setfam\_1 (u1\_struct\_0 X3) X2 = ReplSep \\ (toset (\lambda X4 : \iota.m1\_subset\_1 X4 (u1\_struct\_0 X3))) (\lambda X4 : \\ \iota.X4 \in X0) (\lambda X4 : \iota.X1 X4))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0)))\Rightarrow(k5\_setfam\_1 X0 X1 = k3\_tarski X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0)))\Rightarrow(k7\_setfam\_1 X0 (k7\_setfam\_1 X0 X1) = X1) \quad (5)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0)\Rightarrow(l1\_struct\_0 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0)))\Rightarrow(m1\_subset\_1 (k7\_setfam\_1 X0 X1) (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0))) \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge(l1\_orders\_2 X0))\Rightarrow(\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))\Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))\Rightarrow \\ & ((X1 = ReplSep (toset (\lambda X3 : \iota.m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0))) (\lambda X3 : \iota.X3 \in X2) (\lambda X3 : \iota.k3\_subset\_1 (u1\_struct\_0 \\ & X0) (k6\_waybel\_0 X0 X3)))\Rightarrow(k8\_setfam\_1 (u1\_struct\_0 X0) X1 = k3\_subset\_1 \\ & (u1\_struct\_0 X0) (k4\_waybel\_0 X0 X2)))))) \end{aligned}$$