

t38\_topgen\_1  
(TMcHRd448areJnoqnraCqjJZUztocXV44Rt)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  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  $v4\_topgen\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_topgen\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_topgen\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_topgen\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0)))) \Rightarrow ((v4\_topgen\_1 X1 X0) \Rightarrow (r1\_tarski (k5\_setfam\_1 \\ (u1\_struct\_0 X0) X1) (k5\_setfam\_1 (u1\_struct\_0 X0) (k3\_topgen\_1 \\ X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0)))) \Rightarrow (r1\_tarski (k5\_setfam\_1 (u1\_struct\_0 X0) \\ (k3\_topgen\_1 X0 X1)) (k2\_topgen\_1 X0 (k5\_setfam\_1 (u1\_struct\_0 \\ X0) X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0))) \Rightarrow (m1\_subset\_1 (k5\_setfam\_1 X0 X1) (k1\_zfmisc\_1 X0)) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0. ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v2\_topgen\_1 \\ X1 X0) \Leftrightarrow (r1\_tarski X1 (k2\_topgen\_1 X0 X1)))) \end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0)))) \Rightarrow ((v4\_topgen\_1 X1 X0) \Rightarrow (v2\_topgen\_1 (k5\_setfam\_1 \\ (u1\_struct\_0 X0) X1) X0))) \end{aligned}$$