

t14\_topgen\_4  
(TMYXtvFnKuMer34gdXpa5iSKumcfsDfVjqM)

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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  $v2\_topgen\_4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_prob\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_topgen\_4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (k3\_subset\_1 X0 (k3\_subset\_1 X0 X1) = X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \wedge ((v3\_pre\_topc X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow (v4\_pre\_topc (k3\_subset\_1 (u1\_struct\_0 X0) X1) X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \wedge ((v4\_pre\_topc X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow (v3\_pre\_topc (k3\_subset\_1 (u1\_struct\_0 X0) X1) X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (m1\_subset\_1 (k3\_subset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((v2\_topgen\_4 X1 X0) \Leftrightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)) \Rightarrow ((v4\_pre\_topc X2 X0) \Rightarrow (X2 \in X1))))) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))) \Rightarrow ((v1\_topgen\_4 X1 X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v3\_pre\_topc X2 X0) \Rightarrow (X2 \in \\ & X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow ((v1\_prob\_1 X1 X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow ((X2 \in X1) \Rightarrow (k3\_subset\_1 X0 X2 \in X1)))) \end{aligned} \quad (8)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))) \Rightarrow (((v2\_topgen\_4 X1 X0) \wedge (v1\_prob\_1 X1 (u1\_struct\_0 \\ & X0))) \Rightarrow ((v1\_topgen\_4 X1 X0) \wedge (v1\_prob\_1 X1 (u1\_struct\_0 X0)))) \wedge \\ & (((v1\_topgen\_4 X1 X0) \wedge (v1\_prob\_1 X1 (u1\_struct\_0 X0))) \Rightarrow ((v2\_topgen\_4 \\ & X1 X0) \wedge (v1\_prob\_1 X1 (u1\_struct\_0 X0)))))) \end{aligned}$$