

t42\_topgen\_1  
(TMMk4f14MAmqLhqdejMR5ovsLv5t5G1SQWb)

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Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v5\_topgen\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_struct\_0 : \iota \Rightarrow \iota$  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  $k2\_topgen\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v5\_topgen\_1 \\ & X1 X0) \Leftrightarrow (k2\_topgen\_1 X0 X1 = X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (k2\_topgen\_1 X0 (k1\_struct\_0 X0) = k1\_struct\_0 X0) \quad (2)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc X0) \Rightarrow (l1\_struct\_0 X0) \quad (3)$$

Assume the following.

$$\forall X0.(l1\_struct\_0 X0) \Rightarrow (m1\_subset\_1 (k1\_struct\_0 X0) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \quad (4)$$

Assume the following.

$$k1\_xboole\_0 = the (\lambda X0 : \iota.v1\_xboole\_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.(l1\_struct\_0 X0) \Rightarrow (k1\_struct\_0 X0 = k1\_xboole\_0) \quad (6)$$

**Theorem 1**

$$\forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (v5\_topgen\_1 (k1\_struct\_0 X0) X0)$$