

t11\_topgen\_4  
(TMPo9djE3rHrgZVD12FYQfqvVXPPqgkLCj3)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v1\_tdlat\_3 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v7\_topgen\_1 : \iota \Rightarrow o$  be given. Let  $v1\_orders\_4 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Assume the following.

$$\forall X0.(l1\_struct\_0 X0) \Rightarrow ((v1\_orders\_4 X0) \Leftrightarrow (r1\_ordinal1 (k1\_card\_1 (k2\_struct\_0 X0)) k4\_ordinal1)) \quad (1)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge ((v1\_tdlat\_3 X0) \wedge (l1\_pre\_topc X0)))) \Rightarrow ((v7\_topgen\_1 X0) \Leftrightarrow (r1\_ordinal1 (k1\_card\_1 (k2\_struct\_0 X0)) k4\_ordinal1)) \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1\_pre\_topc X0) \Rightarrow (((v2\_pre\_topc X0) \wedge (v1\_orders\_4 X0)) \Rightarrow ((v2\_pre\_topc X0) \wedge (v7\_topgen\_1 X0))) \quad (4)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge ((v1\_tdlat\_3 X0) \wedge (l1\_pre\_topc X0)))) \Rightarrow ((v7\_topgen\_1 X0) \Leftrightarrow (v1\_orders\_4 X0))$$