

t8\_o\_ring\_1  
(TML7HBYHCa94m18QEUYhAM8bdxcG9YeDqup)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v7\_o\_ring\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_o\_ring\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_o\_ring\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow (((v7\_o\_ring\_1 X1 X0) \wedge (v5\_o\_ring\_1 X2 X0)) \Rightarrow \\ & (v7\_o\_ring\_1 (k1\_algstr\_0 X0 X1 X2) X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v1\_o\_ring\_1 X1 X0) \Rightarrow (v5\_o\_ring\_1 \\ & X1 X0))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow (((v7\_o\_ring\_1 X1 X0) \wedge (v1\_o\_ring\_1 X2 X0)) \vee \\ & ((v7\_o\_ring\_1 X1 X0) \wedge (v5\_o\_ring\_1 X2 X0))) \Rightarrow (v7\_o\_ring\_1 (k1\_algstr\_0 \\ & X0 X1 X2) X0)))) \end{aligned}$$