

t3\_group\_3  
(TMZFf8KLBnii94JQURrpw1XMNZ4NwhGWaUK)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_group\_1 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v5\_group\_1 : \iota \Rightarrow o$  be given. Let  $k6\_group\_2 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v15\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k1\_group\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow (k6\_domain\_1 X0 X1 = k1\_tarski X1) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge (l3\_algstr\_0 X0))) \Rightarrow (\forall X1. (m1\_group\_2 X1 X0) \Rightarrow ((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 X1) \wedge (l3\_algstr\_0 X1)))) \quad (4)$$

Assume the following.

$$\forall X0. (l3\_algstr\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (5)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow ((v15\_algstr\_0 (k6\_group\_2 X0)) \wedge (m1\_group\_2 (k6\_group\_2 X0) X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l3\_algstr\_0 X0) \Rightarrow (m1\_subset\_1 (k1\_group\_1 X0) (u1\_struct\_0 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.((v15\_algstr\_0 X1) \wedge (m1\_group\_2 \\ X1 X0)) \Rightarrow ((X1 = k6\_group\_2 X0) \Leftrightarrow (u1\_struct\_0 X1 = k6\_domain\_1 (u1\_struct\_0 \\ X0) (k1\_group\_1 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(l3\_algstr\_0 X0) \Rightarrow ((v5\_group\_1 X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)) \Rightarrow (k6\_algstr\_0 X0 X1 X2 = k6\_algstr\_0 X0 X2 X1)))) \end{aligned} \quad (10)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (v5\_group\_1 (k6\_group\_2 X0))$$