

# t14\_group\_1 (TM- cAGT9sp27MEM3oBy9NMSjcRKUk7qugZG3)

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_group\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_group\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (((k6\_algstr\_0 \\ X0 X1 X2 = X1) \vee (k6\_algstr\_0 X0 X2 X1 = X1)) \Rightarrow (X2 = k1\_group\_1 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((k6\_algstr\_0 \\ X0 X1 X2 = k1\_group\_1 X0) \Rightarrow ((X1 = k2\_group\_1 X0 X2) \wedge (X2 = k2\_group\_1 \\ X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(l3\_algstr\_0 X0) \Rightarrow ((v3\_group\_1 X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 \\ X0 (k6\_algstr\_0 X0 X1 X2) X3 = k6\_algstr\_0 X0 X1 (k6\_algstr\_0 X0 X2 \\ X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(l3\_algstr\_0 X0) \Rightarrow ((v2\_group\_1 X0) \Leftrightarrow (\exists X1.(m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \wedge (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)) \Rightarrow ((k6\_algstr\_0 X0 X2 X1 = X2) \wedge ((k6\_algstr\_0 X0 X1 X2 = X2) \wedge (\exists X3. \\ (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \wedge ((k6\_algstr\_0 X0 X2 X3 = X1) \wedge \\ (k6\_algstr\_0 X0 X3 X2 = X1)))))))) \end{aligned} \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((k6\_algstr\_0 X0 X1 X2 = X3) \Leftrightarrow \\ & (X1 = k6\_algstr\_0 X0 X3 (k2\_group\_1 X0 X2))))) \end{aligned}$$