

# t7\_group\_1

(TMH62SmxmQmnMfZYCG7hxeNkvBcEHJXnypk)

October 27, 2020

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  $k1\_group\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_group\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (((k6\_algstr\_0 X0 X1 X2 = k6\_algstr\_0 \\ & X0 X1 X3) \vee (k6\_algstr\_0 X0 X2 X1 = k6\_algstr\_0 X0 X3 X1)) \Rightarrow (X2 = X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l3\_algstr\_0 X0) \Rightarrow ((v1\_group\_1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 \\ & X1 (u1\_struct\_0 X0)) \Rightarrow ((X1 = k1\_group\_1 X0) \Leftrightarrow (\forall X2. (m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow ((k6\_algstr\_0 X0 X2 X1 = X2) \wedge (k6\_algstr\_0 \\ & X0 X1 X2 = X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l3\_algstr\_0 X0) \Rightarrow ((v1\_group\_1 X0) \Leftrightarrow (\exists X1. (m1\_subset\_1 \\ & X1 (u1\_struct\_0 X0)) \wedge (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 \\ & X0)) \Rightarrow ((k6\_algstr\_0 X0 X2 X1 = X2) \wedge (k6\_algstr\_0 X0 X1 X2 = X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (l3\_algstr\_0 X0) \Rightarrow ((v2\_group\_1 X0) \Rightarrow (v1\_group\_1 X0)) \quad (4)$$

### Theorem 1

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