

# t8\_group\_11 (TMX- dAWKe1HBDeEKmutgLwaaBSLM2m9RXV5e)

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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  $v15\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v1\_group\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k7\_group\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.((v15\_algstr\_0 X1) \wedge ((v1\_group\_3 \\ & X1 X0) \wedge (m1\_group\_2 X1 X0))) \Rightarrow (\forall X2.((v15\_algstr\_0 X2) \wedge ( \\ & (v1\_group\_3 X2 X0) \wedge (m1\_group\_2 X2 X0))) \Rightarrow (\exists X3.((v15\_algstr\_0 \\ & X3) \wedge ((v1\_group\_3 X3 X0) \wedge (m1\_group\_2 X3 X0))) \wedge (u1\_struct\_0 X3 = \\ & k2\_group\_2 X0 (k8\_group\_2 X0 X1) (k8\_group\_2 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow (\forall X2. \\ & (m1\_group\_2 X2 X0) \Rightarrow (k7\_group\_4 X0 X1 X2 = k2\_group\_2 X0 (k8\_group\_2 \\ & X0 X1) (k8\_group\_2 X0 X2)))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.((v15\_algstr\_0 X1) \wedge ((v1\_group\_3 \\ & X1 X0) \wedge (m1\_group\_2 X1 X0))) \Rightarrow (\forall X2.((v15\_algstr\_0 X2) \wedge ( \\ & (v1\_group\_3 X2 X0) \wedge (m1\_group\_2 X2 X0))) \Rightarrow (\exists X3.((v15\_algstr\_0 \\ & X3) \wedge ((v1\_group\_3 X3 X0) \wedge (m1\_group\_2 X3 X0))) \wedge (u1\_struct\_0 X3 = \\ & k7\_group\_4 X0 X1 X2)))) \end{aligned}$$