

t6\_monoid\_0

(TMK4gwJ9V2A8JTE4MxZEBQcTn5o3hJGgReW)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v1\_group\_1 : \iota \Rightarrow o$  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. Assume the following.

$$\begin{aligned} \forall X0.(l3\_algstr\_0 X0) \Rightarrow ((v1\_group\_1 X0) \Leftrightarrow (\exists X1.(m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \wedge (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)) \Rightarrow ((k6\_algstr\_0 X0 X2 X1 = X2) \wedge (k6\_algstr\_0 X0 X1 X2 = X2)))))) \end{aligned} \quad (1)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l3\_algstr\_0 X0)) \Rightarrow ((v1\_group\_1 \\ X0) \Leftrightarrow (\exists X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge (\forall X2. \\ (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((k6\_algstr\_0 X0 X1 X2 = X2) \wedge \\ (k6\_algstr\_0 X0 X2 X1 = X2)))))) \end{aligned}$$