

# t4\_group\_9 (TMKb- WeyuR9GkD9eypLai4oCtUDPdpydZgNh)

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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  $v3\_group\_9 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_group\_9 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_group\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_group\_1 : \iota \Rightarrow \iota$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_group\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow (k1\_group\_1 X1 = k1\_group\_1 X0)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 X1) \wedge ((v3\_group\_1 X1) \wedge ((v3\_group\_9 X1 X0) \wedge (l1\_group\_9 X1 X0))))) \Rightarrow (\forall X2.(m1\_group\_9 X2 X0 X1) \Rightarrow ((\neg v2\_struct\_0 X2) \wedge ((v2\_group\_1 X2) \wedge ((v3\_group\_1 X2) \wedge ((v3\_group\_9 X2 X0) \wedge (l1\_group\_9 X2 X0))))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(l1\_group\_9 X1 X0) \Rightarrow (l3\_algstr\_0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 X1) \wedge ((v3\_group\_1 X1) \wedge ((v3\_group\_9 X1 X0) \wedge (l1\_group\_9 X1 X0))))) \Rightarrow (\forall X2.((\neg v2\_struct\_0 X2) \wedge ((v2\_group\_1 X2) \wedge ((v3\_group\_1 X2) \wedge ((v3\_group\_9 X2 X0) \wedge (l1\_group\_9 X2 X0))))) \Rightarrow ((m1\_group\_9 X2 X0 X1) \Leftrightarrow ((m1\_group\_2 X2 X1) \wedge (\forall X3.(m1\_subset\_1 X3 X0) \Rightarrow (k3\_group\_9 X0 X2 X3 = k2\_partfun1 (u1\_struct\_0 X1) (u1\_struct\_0 X1) (k3\_group\_9 X0 X1 X3) (u1\_struct\_0 X2))))) \quad (4)$$

**Theorem 1**

$$\forall X0.\forall X1.((\neg v2\_struct\_0 X1)\wedge((v2\_group\_1 X1)\wedge(v3\_group\_1 X1)\wedge(v3\_group\_9 X1 X0)\wedge(l1\_group\_9 X1 X0))))\Rightarrow(\forall X2.(m1\_group\_9 X2 X0 X1)\Rightarrow(k1\_group\_1 X1 = k1\_group\_1 X2))$$