

t40\_group\_4  
(TMdYct9h14piWJV3tFqcsSW6Kw4nF2ka1is)

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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  $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_group\_4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_group\_4 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow (\forall X2. \\ (m1\_group\_2 X2 X0) \Rightarrow ((\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ X0)) \Rightarrow ((r1\_struct\_0 X1 X3) \Rightarrow (r1\_struct\_0 X2 X3))) \Rightarrow (m1\_group\_2 \\ X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X2.((\neg v2\_struct\_0 X2) \wedge ((v2\_group\_1 X2) \wedge ((v3\_group\_1 \\ X2) \wedge (l3\_algstr\_0 X2)))) \Rightarrow ((\exists X3.((v15\_algstr\_0 X3) \wedge (m1\_group\_2 \\ X3 X2)) \wedge (v2\_group\_4 X3 X2)) \Rightarrow ((r1\_struct\_0 (k6\_group\_4 X2) X1) \Leftrightarrow \\ (\forall X3.((v15\_algstr\_0 X3) \wedge (m1\_group\_2 X3 X2)) \Rightarrow ((v2\_group\_4 \\ X3 X2) \Rightarrow (r1\_struct\_0 X3 X1))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow ((v15\_algstr\_0 (k6\_group\_4 X0)) \wedge (m1\_group\_2 \\ (k6\_group\_4 X0) X0)) \end{aligned} \quad (3)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.((v15\_algstr\_0 X1) \wedge (m1\_group\_2 \\ X1 X0)) \Rightarrow ((v2\_group\_4 X1 X0) \Rightarrow (m1\_group\_2 (k6\_group\_4 X0) X1))) \end{aligned}$$