

# t129\_group\_3

(TMQB4jC9QYYKA<sub>g</sub>4TdPtdk7x3LWLwTEcvSyv)

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_group\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_group\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v15\_algstr\_0 : \iota \Rightarrow o$  be given. Assume the following.

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

Assume the following.

$$\forall X0.(l3\_algstr\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((v15\_algstr\_0 (k10\_group\_3 X0 X1)) \wedge (m1\_group\_2 (k10\_group\_3 X0 X1) X0)) \quad (3)$$

Assume the following.

$$\forall X0.(l1\_struct\_0 X0) \Rightarrow (\forall X1.(r1\_struct\_0 X0 X1) \Leftrightarrow (X1 \in u1\_struct\_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2.((v15\_algstr\_0 X2) \wedge (m1\_group\_2 X2 X0)) \Rightarrow ((X2 = k10\_group\_3 X0 X1) \Leftrightarrow (u1\_struct\_0 X2 = ReplSep (toset (\lambda X3 : \iota.m1\_subset\_1 X3 (u1\_struct\_0 X0))) (\lambda X3 : \iota.k4\_group\_3 X0 X1 X3 = X1) (\lambda X3 : \iota.X3)))))) \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge (v2\_group\_1 X1) \wedge \\ & (v3\_group\_1 X1) \wedge (l3\_algstr\_0 X1)) \Rightarrow (\forall X2. (m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (u1\_struct\_0 X1))) \Rightarrow ((r1\_struct\_0 (k10\_group\_3 \\ & X1 X2) X0) \Leftrightarrow (\exists X3. (m1\_subset\_1 X3 (u1\_struct\_0 X1)) \wedge ((X0 = \\ & X3) \wedge (k4\_group\_3 X1 X2 X3 = X2)))))) \end{aligned}$$