

# t31\_group\_3 (TM- RkQtmna1BhcZeNs9XyGtMqBsZN4WsgaWr)

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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  $k3\_group\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_group\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0))) \Rightarrow (k3\_group\_3 X0 X1 X2 = ReplSep2 (toset (\lambda X3 : \\ \iota. m1\_subset\_1 X3 (u1\_struct\_0 X0))) (\lambda X3 : \iota. toset (\lambda X4 : \\ \iota. m1\_subset\_1 X4 (u1\_struct\_0 X0))) (\lambda X3 : \iota. \lambda X4 : \iota. \\ (X3 \in X1) \wedge (X4 \in X2)) (\lambda X3 : \iota. \lambda X4 : \iota. k2\_group\_3 X0 X3 X4)))))) \end{aligned} \quad (2)$$

## Theorem 1

$$\begin{aligned} \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 X1) \wedge \\ (v3\_group\_1 X1) \wedge (l3\_algstr\_0 X1))) \Rightarrow (\forall X2. (m1\_subset\_1 \\ X2 (k1\_zfmisc\_1 (u1\_struct\_0 X1))) \Rightarrow (\forall X3. (m1\_subset\_1 \\ X3 (k1\_zfmisc\_1 (u1\_struct\_0 X1))) \Rightarrow ((X0 \in k3\_group\_3 X1 X2 X3) \Leftrightarrow \\ (\exists X4. (m1\_subset\_1 X4 (u1\_struct\_0 X1)) \wedge (\exists X5. (m1\_subset\_1 \\ X5 (u1\_struct\_0 X1)) \wedge ((X0 = k2\_group\_3 X1 X4 X5) \wedge ((X4 \in X2) \wedge (X5 \in \\ X3)))))))))) \end{aligned}$$