

# t4\_group\_3 (TM- RfThm8TxyMr5gFY4WJJGhFTa4brud2NFq)

October 27, 2020

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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge (l3\_algstr\_0 X1)) \Rightarrow \\
 & (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X1))) \Rightarrow \\
 & (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X1))) \Rightarrow \\
 & ((X0 \in k2\_group\_2 X1 X2 X3) \Leftrightarrow (\exists X4. (m1\_subset\_1 X4 (u1\_struct\_0 \\
 & X1)) \wedge (\exists X5. (m1\_subset\_1 X5 (u1\_struct\_0 X1)) \wedge ((X0 = k6\_algstr\_0 \\
 & X1 X4 X5) \wedge ((X4 \in X2) \wedge (X5 \in X3))))))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \tag{2}$$

## Theorem 1

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\
 & X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
 & (u1\_struct\_0 X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
 & (u1\_struct\_0 X0))) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\
 & (u1\_struct\_0 X0))) \Rightarrow (\forall X4. (m1\_subset\_1 X4 (k1\_zfmisc\_1 \\
 & (u1\_struct\_0 X0))) \Rightarrow (((r1\_tarski X1 X2) \wedge (r1\_tarski X3 X4)) \Rightarrow (r1\_tarski \\
 & (k2\_group\_2 X0 X1 X3) (k2\_group\_2 X0 X2 X4))))))
 \end{aligned}$$