

t108\_group\_3  
(TMXDo714Atd6xUJyPrnARDp3uni7QdMWrbD)

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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  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v15\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_group\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_group\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r5\_group\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_group\_3 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.((v15\_algstr\_0 X1) \wedge (m1\_group\_2 \\ X1 X0)) \Rightarrow (\forall X2.((v15\_algstr\_0 X2) \wedge (m1\_group\_2 X2 X0)) \Rightarrow ( \\ (r5\_group\_3 X0 X1 X2) \Leftrightarrow (\exists X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ X0)) \wedge (r1\_group\_2 X0 X2 (k6\_group\_3 X0 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge \\ ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \wedge (m1\_group\_2 X1 X0)) \Rightarrow (m1\_subset\_1 \\ (k9\_group\_3 X0 X1) (k1\_zfmisc\_1 (k1\_group\_3 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 \\ X0) \wedge ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \wedge ((m1\_group\_2 X1 X0) \wedge \\ (m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow ((v15\_algstr\_0 (k6\_group\_3 \\ X0 X1 X2)) \wedge (m1\_group\_2 (k6\_group\_3 X0 X1 X2) X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\
& X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow (\forall X2. \\
& (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_group\_3 X0))) \Rightarrow ((X2 = k9\_group\_3 \\
& X0 X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.((v15\_algstr\_0 X4) \wedge ( \\
& m1\_group\_2 X4 X0)) \wedge ((X3 = X4) \wedge (r5\_group\_3 X0 X1 X4))))))
\end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\
& X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X2.((v15\_algstr\_0 X2) \wedge (m1\_group\_2 X2 X0)) \Rightarrow (k6\_group\_3 \\
& X0 X2 X1 \in k9\_group\_3 X0 X2)))
\end{aligned}$$