

# t59\_group\_11 (TMVHuYPNDffLGfwTK- fAv1wkoD1Wfsf7R4HL)

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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  $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_group\_11 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u2\_algstr\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k13\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge (l3\_algstr\_0 X0))) \Rightarrow (\forall X1. (m1\_group\_2 X1 X0) \Rightarrow ((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 X1) \wedge (l3\_algstr\_0 X1)))) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1. (m1\_group\_2 X1 X0) \Rightarrow (k8\_group\_2 X0 X1 = u1\_struct\_0 X1)) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge (l3\_algstr\_0 X0))) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 X1) \wedge (l3\_algstr\_0 X1))) \Rightarrow ((m1\_group\_2 X1 X0) \Leftrightarrow ((r1\_tarski (u1\_struct\_0 X1) (u1\_struct\_0 X0)) \wedge (u2\_algstr\_0 X1 = k1\_realset1 (u2\_algstr\_0 X0) (u1\_struct\_0 X1)))))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\
& X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow (\forall X2. \\
& (m1\_group\_2 X2 X0) \Rightarrow (k3\_group\_11 X0 X1 X2 = ReplSep (toset (\lambda X3 : \\
& \iota.m1\_subset\_1 X3 (u1\_struct\_0 X0))) (\lambda X3 : \iota.r1\_tarski \\
& (k13\_group\_2 X0 X2 X3) (k8\_group\_2 X0 X1)) (\lambda X3 : \iota.X3)))) \\
& \tag{6}
\end{aligned}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\
& X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow (\forall X2. \\
& (m1\_group\_2 X2 X0) \Rightarrow (\forall X3.(m1\_group\_2 X3 X0) \Rightarrow ((m1\_group\_2 \\
& X1 X2) \Rightarrow (r1\_tarski (k3\_group\_11 X0 X1 X3) (k3\_group\_11 X0 X2 X3))))))
\end{aligned}$$