

# l46\_group\_9 (TMKsre- gRy1vzXQL2MWkbgQFtkCLCCszK3Ra)

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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  $v3\_group\_9 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_group\_9 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_group\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_group\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X0 X1) \Rightarrow (k5\_relat\_1 (k5\_relat\_1 X2 X1) X0 = k5\_relat\_1 X2 X0)) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1. (m1\_group\_2 X1 X0) \Rightarrow (\forall X2. (m1\_group\_2 X2 X0) \Rightarrow ((r1\_tarski (u1\_struct\_0 X1) (u1\_struct\_0 X2)) \Rightarrow (m1\_group\_2 X1 X2)))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \Rightarrow (k2\_partfun1 X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v2\_group\_1 X1) \wedge ((v3\_group\_1 X1) \wedge ((v3\_group\_9 X1 X0) \wedge (l1\_group\_9 X1 X0)))))) \Rightarrow (\forall X2. (m1\_group\_9 X2 X0 X1) \Rightarrow ((\neg v2\_struct\_0 X2) \wedge ((v2\_group\_1 X2) \wedge ((v3\_group\_1 X2) \wedge ((v3\_group\_9 X2 X0) \wedge (l1\_group\_9 X2 X0)))))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(l1\_group\_9 X1 X0)\Rightarrow(l3\_algstr\_0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X1)\wedge((v2\_group\_1 \\ & X1)\wedge((v3\_group\_1 X1)\wedge((v3\_group\_9 X1 X0)\wedge(l1\_group\_9 X1 X0))))\wedge \\ & (m1\_subset\_1 X2 X0))\Rightarrow((v1\_funct\_1 (k3\_group\_9 X0 X1 X2))\wedge((v1\_funct\_2 \\ & (k3\_group\_9 X0 X1 X2) (u1\_struct\_0 X1) (u1\_struct\_0 X1))\wedge((v1\_group\_6 \\ & (k3\_group\_9 X0 X1 X2) X1 X1)\wedge(m1\_subset\_1 (k3\_group\_9 X0 X1 X2) ( \\ & k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2\_struct\_0 X1)\wedge((v2\_group\_1 X1)\wedge( \\ & (v3\_group\_1 X1)\wedge((v3\_group\_9 X1 X0)\wedge(l1\_group\_9 X1 X0))))\Rightarrow( \\ & \forall X2.((\neg v2\_struct\_0 X2)\wedge((v2\_group\_1 X2)\wedge((v3\_group\_1 \\ & X2)\wedge((v3\_group\_9 X2 X0)\wedge(l1\_group\_9 X2 X0))))\Rightarrow((m1\_group\_9 \\ & X2 X0 X1)\Leftrightarrow((m1\_group\_2 X2 X1)\wedge(\forall X3.(m1\_subset\_1 X3 X0)\Rightarrow \\ & (k3\_group\_9 X0 X2 X3 = k2\_partfun1 (u1\_struct\_0 X1) (u1\_struct\_0 \\ & X1) (k3\_group\_9 X0 X1 X3) (u1\_struct\_0 X2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (8)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2\_struct\_0 X1)\wedge((v2\_group\_1 X1)\wedge( \\ & (v3\_group\_1 X1)\wedge((v3\_group\_9 X1 X0)\wedge(l1\_group\_9 X1 X0))))\Rightarrow( \\ & \forall X2.(m1\_group\_9 X2 X0 X1)\Rightarrow(\forall X3.(m1\_group\_9 X3 X0 \\ & X1)\Rightarrow((r1\_tarski (u1\_struct\_0 X2) (u1\_struct\_0 X3))\Rightarrow(m1\_group\_9 \\ & X2 X0 X3)))) \end{aligned}$$