t39_group_7 (TMZX6hVhqmZBnWDwJE2pBJUPVR3DkySt4gf)

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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 $r1\_group\_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_group\_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k9\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_group\_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v2\_group\_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_group\_7 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v3\_group\_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v15\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v1\_monoid\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0)))) \wedge ((v1\_group\_6\ X1\ X0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0))) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0))))))))) \Rightarrow ((\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0)))\ X1\ X2 = k4\_group\_7\ X0\ X2)) \Rightarrow (v3\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0))))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0))))))))\Rightarrow((\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0)))\ X1\ X2 = k4\_group\_7\ X0\ X2))\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0))))\wedge((v1\_group\_6\ X1\ X0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0)))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0)))))))))) \tag{2}$$

Assume the following.

$$\forall X0 : \iota\Rightarrow\iota.\forall X1.\forall X2.\exists X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X2\ X1)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X1)))))\wedge(\forall X4.(m1\_subset\_1\ X4\ X2)\Rightarrow(k3\_funct\_2\ X2\ X1\ X3\ X4 = X0\ X4)) \tag{3}$$

Assume the following.

$$\forall X0.k9\_finseq\_1\ X0 = k5\_finseq\_1\ X0 \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0)))\Rightarrow(v2\_group\_7\ (k5\_finseq\_1\ X0)\ (k1\_tarski\ np\_\_1)) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l3\_algstr\_0\ X0))\Rightarrow((v1\_partfun1\ (k5\_finseq\_1\ X0)\ (k1\_tarski\ np\_\_1))\wedge(v1\_group\_7\ (k5\_finseq\_1\ X0))) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l3\_algstr\_0\ X0))\Rightarrow(v4\_relat\_1\ (k5\_finseq\_1\ X0)\ (k1\_tarski\ np\_\_1)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge((v1\_group\_7\ X1)\wedge(v3\_group\_7\ X1\ X0))))))\Rightarrow((v15\_algstr\_0\ (k2\_group\_7\ X0\ X1))\wedge(v3\_group\_1\ (k2\_group\_7\ X0\ X1))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge((v1\_group\_7\ X1)\wedge(v2\_group\_7\ X1\ X0))))))\Rightarrow((v15\_algstr\_0\ (k2\_group\_7\ X0\ X1))\wedge(v2\_group\_1\ (k2\_group\_7\ X0\ X1))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge(v1\_group\_7\ X1)))))\Rightarrow((\neg v2\_struct\_0\ (k2\_group\_7\ X0\ X1))\wedge((v15\_algstr\_0\ (k2\_group\_7\ X0\ X1))\wedge(v1\_monoid\_0\ (k2\_group\_7\ X0\ X1)))) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0)))\Rightarrow(v3\_group\_7\ (k5\_finseq\_1\ X0)\ (k1\_tarski\ np\_\_1)) \tag{11}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k9\_finseq\_1\ X0))\wedge(v1\_funct\_1\ (k9\_finseq\_1\ X0)) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge(v1\_group\_7\ X1)))))\Rightarrow((v15\_algstr\_0\ (k2\_group\_7\ X0\ X1))\wedge(l3\_algstr\_0\ (k2\_group\_7\ X0\ X1))) \tag{13}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_group\_1\ X1)\wedge((v3\_group\_1\ X1)\wedge(l3\_algstr\_0\ X1))))\Rightarrow((r1\_group\_6\ X0\ X1)\Leftrightarrow(\exists X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge((v1\_group\_6\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)))))))\wedge(v3\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))) \tag{14}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(r1\_group\_6\ X0\ (k2\_group\_7\ (k1\_tarski\ np\_\_1)\ (k9\_finseq\_1\ X0)))$$