t14_autgroup (TMSn6jhNShLE5ktU8ph2f7tVu5YvFncKY3o)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v15\_algstr\_0 : \iota \Rightarrow o$ 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 $m2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_autgroup : \iota \Rightarrow \iota$ be given. Let $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_autgroup : \iota \Rightarrow \iota$ be given. Let $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_autgroup : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k5\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v15\_algstr\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0))))) \Rightarrow (\forall X1.(m2\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (k4\_autgroup\ X0)) \Rightarrow (m2\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (k1\_autgroup\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X1) \wedge (m1\_funct\_2\ X2\ X0\ X1)) \Rightarrow (\forall X3.(m2\_funct\_2\ X3\ X0\ X1\ X2) \Leftrightarrow (m1\_subset\_1\ X3\ X2)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)))))) \wedge ((m1\_subset\_1\ X2\ X0) \wedge (m1\_subset\_1\ X3\ X0))) \Rightarrow (k5\_binop\_1\ X0\ X1\ X2\ X3 = k1\_binop\_1\ X1\ X2\ X3) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_struct\_0\ X0)) \Rightarrow (\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0) \Rightarrow (l1\_struct\_0\ X0) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v15\_algstr\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0))))) \Rightarrow ((v1\_funct\_1\ (k2\_autgroup\ X0)) \wedge ((v1\_funct\_2\ (k2\_autgroup\ X0)\ (k2\_zfmisc\_1\ (k1\_autgroup\ X0)\ (k1\_autgroup\ X0))\ (k1\_autgroup\ X0)) \wedge (m1\_subset\_1\ (k2\_autgroup\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_autgroup\ X0)\ (k1\_autgroup\ X0))\ (k1\_autgroup\ X0))))))) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v15\_algstr\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0))))) \Rightarrow (m1\_funct\_2\ (k1\_autgroup\ X0)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v15\_algstr\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0))))) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ (k1\_autgroup\ X0)\ (k1\_autgroup\ X0))\ (k1\_autgroup\ X0)) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_autgroup\ X0)\ (k1\_autgroup\ X0))\ (k1\_autgroup\ X0)))))) \Rightarrow ((X1 = k2\_autgroup\ X0) \Leftrightarrow (\forall X2.(m2\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (k1\_autgroup\ X0)) \Rightarrow (\forall X3.(m2\_funct\_2\ X3\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (k1\_autgroup\ X0)) \Rightarrow (k5\_binop\_1\ (k1\_autgroup\ X0)\ X1\ X2\ X3 = k1\_partfun1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ X3\ X2))))) \tag{8}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v15\_algstr\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0))))) \Rightarrow (\forall X1.(m2\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (k4\_autgroup\ X0)) \Rightarrow (\forall X2.(m2\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (k4\_autgroup\ X0)) \Rightarrow (k1\_binop\_1\ (k2\_autgroup\ X0)\ X1\ X2 = k1\_partfun1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ X2\ X1)))$$