t1_group_7 (TMW1mjTfkd689VwcrA3u5wzmz8jR7Kr1mFW)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_group\_7 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ 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 $k2\_group\_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $v15\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k4\_card\_3 : \iota \Rightarrow \iota$ be given. Let $k12\_pralg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0))))) \wedge ((m1\_subset\_1\ X2\ X0) \wedge (m1\_subset\_1\ X3\ X0))) \Rightarrow (k5\_binop\_1\ X0\ X1\ X2\ X3 = k1\_binop\_1\ X1\ X2\ X3) \tag{1}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0) \Rightarrow ((v1\_funct\_1\ (u2\_algstr\_0\ X0)) \wedge ((v1\_funct\_2\ (u2\_algstr\_0\ X0)\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ (u2\_algstr\_0\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ X0) \wedge ((v1\_funct\_1\ X1) \wedge ((v1\_partfun1\ X1\ X0) \wedge (v1\_group\_7\ X1))))) \Rightarrow ((v15\_algstr\_0\ (k2\_group\_7\ X0\ X1)) \wedge (l3\_algstr\_0\ (k2\_group\_7\ X0\ X1))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge(v1\_group\_7\ X1)))))\Rightarrow(\forall X2.((v15\_algstr\_0\ X2)\wedge(l3\_algstr\_0\ X2))\Rightarrow((X2 = k2\_group\_7\ X0\ X1)\Leftrightarrow((u1\_struct\_0\ X2 = k4\_card\_3\ (k12\_pralg\_1\ X0\ X1))\wedge(\forall X3.(m1\_subset\_1\ X3\ (k4\_card\_3\ (k12\_pralg\_1\ X0\ X1)))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (k4\_card\_3\ (k12\_pralg\_1\ X0\ X1)))\Rightarrow(\forall X5.\neg(X5 \in X0)\wedge(\forall X6.((\neg v2\_struct\_0\ X6)\wedge(l3\_algstr\_0\ X6))\Rightarrow(\forall X7.((v1\_relat\_1\ X7)\wedge(v1\_funct\_1\ X7))\Rightarrow(\neg(X6 = k1\_funct\_1\ X1\ X5)\wedge((X7 = k1\_binop\_1\ (u2\_algstr\_0\ X2)\ X3\ X4)\wedge(k1\_funct\_1\ X7\ X5 = k1\_binop\_1\ (u2\_algstr\_0\ X6)\ (k1\_funct\_1\ X3\ X5)\ (k1\_funct\_1\ X4\ X5)))))))))))) \tag{4}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ X2 = k5\_binop\_1\ (u1\_struct\_0\ X0)\ (u2\_algstr\_0\ X0)\ X1\ X2))) \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2)\wedge(v1\_funct\_1\ X2))\Rightarrow(\forall X3.((v1\_relat\_1\ X3)\wedge(v1\_funct\_1\ X3))\Rightarrow(\forall X4.((v1\_relat\_1\ X4)\wedge(v1\_funct\_1\ X4))\Rightarrow(\forall X5.((v1\_relat\_1\ X5)\wedge((v4\_relat\_1\ X5\ X0)\wedge((v1\_funct\_1\ X5)\wedge((v1\_partfun1\ X5\ X0)\wedge(v1\_group\_7\ X5)))))\Rightarrow(\forall X6.((\neg v2\_struct\_0\ X6)\wedge(l3\_algstr\_0\ X6))\Rightarrow(\forall X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ (k2\_group\_7\ X0\ X5)))\Rightarrow(\forall X8.(m1\_subset\_1\ X8\ (u1\_struct\_0\ (k2\_group\_7\ X0\ X5)))\Rightarrow(\forall X9.(m1\_subset\_1\ X9\ (u1\_struct\_0\ X6))\Rightarrow(\forall X10.(m1\_subset\_1\ X10\ (u1\_struct\_0\ X6))\Rightarrow(((X1 \in X0)\wedge((X6 = k1\_funct\_1\ X5\ X1)\wedge((X2 = X7)\wedge((X3 = X8)\wedge((X4 = k6\_algstr\_0\ (k2\_group\_7\ X0\ X5)\ X7\ X8)\wedge((k1\_funct\_1\ X2\ X1 = X9)\wedge(k1\_funct\_1\ X3\ X1 = X10)))))))\Rightarrow(k6\_algstr\_0\ X6\ X9\ X10 = k1\_funct\_1\ X4\ X1)))))))))))$$