t19_group_6 (TMPepvghx4es7wFzNAm8LuCavESzGb4f2Na)

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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 $v1\_group\_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $g3\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k4\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_algstr\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0))))) \Rightarrow (\forall X2.\forall X3.(g3\_algstr\_0\ X0\ X1 = g3\_algstr\_0\ X2\ X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \wedge ((v1\_group\_3\ X1\ X0) \wedge (m1\_group\_2\ X1\ X0))) \Rightarrow ((\neg v2\_struct\_0\ (k5\_group\_6\ X0\ X1)) \wedge (v15\_algstr\_0\ (k5\_group\_6\ X0\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \wedge (((v1\_group\_3\ X1\ X0) \wedge (m1\_group\_2\ X1\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ (k5\_group\_6\ X0\ X1))))) \Rightarrow (m1\_subset\_1\ (k6\_group\_6\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\wedge((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0)))\Rightarrow(l3\_algstr\_0\ (k5\_group\_6\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\wedge((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0)))\Rightarrow((v1\_funct\_1\ (k4\_group\_6\ X0\ X1))\wedge((v1\_funct\_2\ (k4\_group\_6\ X0\ X1)\ (k2\_zfmisc\_1\ (k15\_group\_2\ X0\ X1)\ (k15\_group\_2\ X0\ X1))\ (k15\_group\_2\ X0\ X1))\wedge(m1\_subset\_1\ (k4\_group\_6\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_group\_2\ X0\ X1)\ (k15\_group\_2\ X0\ X1))\ (k15\_group\_2\ X0\ X1))))) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(\forall X1.((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k5\_group\_6\ X0\ X1)))\Rightarrow(k6\_group\_6\ X0\ X1\ X2 = X2))) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(\forall X1.((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0))\Rightarrow(k5\_group\_6\ X0\ X1 = g3\_algstr\_0\ (k15\_group\_2\ X0\ X1)\ (k4\_group\_6\ X0\ X1))) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(\forall X1.((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k2\_zfmisc\_1\ (k15\_group\_2\ X0\ X1)\ (k15\_group\_2\ X0\ X1))\ (k15\_group\_2\ X0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_group\_2\ X0\ X1)\ (k15\_group\_2\ X0\ X1))\ (k15\_group\_2\ X0\ X1))))))\Rightarrow((X2 = k4\_group\_6\ X0\ X1)\Leftrightarrow(\forall X3.(m1\_subset\_1\ X3\ (k15\_group\_2\ X0\ X1))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (k15\_group\_2\ X0\ X1))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(((X3 = X5)\wedge(X4 = X6))\Rightarrow(k5\_binop\_1\ (k15\_group\_2\ X0\ X1)\ X2\ X3\ X4 = k2\_group\_2\ X0\ X5\ X6))))))))) \tag{8}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ X2 = k5\_binop\_1\ (u1\_struct\_0\ X0)\ (u2\_algstr\_0\ X0)\ X1\ X2))) \tag{9}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0)\Rightarrow((v15\_algstr\_0\ X0)\Rightarrow(X0 = g3\_algstr\_0\ (u1\_struct\_0\ X0)\ (u2\_algstr\_0\ X0))) \tag{10}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(\forall X1.((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k5\_group\_6\ X0\ X1)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k5\_group\_6\ X0\ X1)))\Rightarrow(k2\_group\_2\ X0\ (k6\_group\_6\ X0\ X1\ X2)\ (k6\_group\_6\ X0\ X1\ X3) = k6\_algstr\_0\ (k5\_group\_6\ X0\ X1)\ X2\ X3))))$$