t18_group_6 (TMJEfitCefFsFcg3zEA3A6romAUg2n5EGTS)

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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 $r1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_group\_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ 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 $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\ ((\neg v1\_xboole\_0\ X1)\wedge((\neg v1\_xboole\_0\ X3)\wedge(((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X0\ X1)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ X2\ X3)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X3))))))))\Rightarrow((r1\_funct\_2\ X0\ X1\ X2\ X3\ X4\ X5)\Leftrightarrow(X4 = X5)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0))))))\Rightarrow(\forall X2.\forall X3.(g3\_algstr\_0\ X0\ X1 = g3\_algstr\_0\ X2\ X3)\Rightarrow((X0 = X2)\wedge(X1 = X3))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\wedge((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0)))\Rightarrow((\neg v2\_struct\_0\ (k5\_group\_6\ X0\ X1))\wedge(v15\_algstr\_0\ (k5\_group\_6\ X0\ X1))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\wedge((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0)))\Rightarrow(\neg v1\_xboole\_0\ (k15\_group\_2\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\wedge((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0)))\Rightarrow(l3\_algstr\_0\ (k5\_group\_6\ X0\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\wedge((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0)))\Rightarrow((v1\_funct\_1\ (k4\_group\_6\ X0\ X1))\wedge((v1\_funct\_2\ (k4\_group\_6\ X0\ X1)\ (k2\_zfmisc\_1\ (k15\_group\_2\ X0\ X1)\ (k15\_group\_2\ X0\ X1))\ (k15\_group\_2\ X0\ X1))\wedge(m1\_subset\_1\ (k4\_group\_6\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_group\_2\ X0\ X1)\ (k15\_group\_2\ X0\ X1))\ (k15\_group\_2\ X0\ X1)))))) \tag{6}$$

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.

$$\forall X0.(l3\_algstr\_0\ X0)\Rightarrow((v15\_algstr\_0\ X0)\Rightarrow(X0 = g3\_algstr\_0\ (u1\_struct\_0\ X0)\ (u2\_algstr\_0\ X0))) \tag{8}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(\forall X1.((v1\_group\_3\ X1\ X0)\wedge(m1\_group\_2\ X1\ X0))\Rightarrow(r1\_funct\_2\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k5\_group\_6\ X0\ X1))\ (u1\_struct\_0\ (k5\_group\_6\ X0\ X1)))\ (u1\_struct\_0\ (k5\_group\_6\ X0\ X1))\ (k2\_zfmisc\_1\ (k15\_group\_2\ X0\ X1)\ (k15\_group\_2\ X0\ X1))\ (k15\_group\_2\ X0\ X1)\ (u2\_algstr\_0\ (k5\_group\_6\ X0\ X1))\ (k4\_group\_6\ X0\ X1)))$$