l46_mod_2 (TMMPbqhQtTTeE394tUhDvejh5YX7SccN4zY)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k18\_mod\_2 : \iota$ be given. Let $np\_\_1 : \iota$ 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 $g6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l4\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l4\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v36\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k17\_mod\_2 : \iota$ be given. Let $k1\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k16\_mod\_2 : \iota$ be given. Let $k14\_mod\_2 : \iota$ be given. Let $k13\_mod\_2 : \iota$ 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. Let $k12\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $u3\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u2\_struct\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0))))) \wedge (((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0))))) \wedge ((m1\_subset\_1\ X3\ X0) \wedge (m1\_subset\_1\ X4\ X0)))) \Rightarrow (\forall X5.\forall X6.\forall X7.\forall X8.\ \forall X9.(g6\_algstr\_0\ X0\ X1\ X2\ X3\ X4 = g6\_algstr\_0\ X5\ X6\ X7\ X8\ X9) \Rightarrow ((X0 = X5) \wedge ((X1 = X6) \wedge ((X2 = X7) \wedge ((X3 = X8) \wedge (X4 = X9))))))) \tag{1}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0) \Rightarrow ((l2\_algstr\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.(l5\_algstr\_0\ X0) \Rightarrow ((l4\_algstr\_0\ X0) \wedge (l4\_struct\_0\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(l4\_algstr\_0\ X0) \Rightarrow ((l3\_struct\_0\ X0) \wedge (l3\_algstr\_0\ X0)) \tag{4}$$

Assume the following.

$$(v36\_algstr\_0\ k18\_mod\_2)\wedge(l6\_algstr\_0\ k18\_mod\_2) \tag{5}$$

Assume the following.

$$m1\_subset\_1\ k17\_mod\_2\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2) \tag{6}$$

Assume the following.

$$m1\_subset\_1\ k16\_mod\_2\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2) \tag{7}$$

Assume the following.

$$\begin{gathered}(v1\_funct\_1\ k14\_mod\_2)\wedge((v1\_funct\_2\ k14\_mod\_2\ (k2\_zfmisc\_1\\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)\ (k1\_enumset1\ k6\_numbers\\ np\_\_1\ np\_\_2))\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\wedge(m1\_subset\_1\\ k14\_mod\_2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_enumset1\\ k6\_numbers\ np\_\_1\ np\_\_2)\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)))))\end{gathered} \tag{8}$$

Assume the following.

$$\begin{gathered}(v1\_funct\_1\ k13\_mod\_2)\wedge((v1\_funct\_2\ k13\_mod\_2\ (k2\_zfmisc\_1\\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)\ (k1\_enumset1\ k6\_numbers\\ np\_\_1\ np\_\_2))\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\wedge(m1\_subset\_1\\ k13\_mod\_2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_enumset1\\ k6\_numbers\ np\_\_1\ np\_\_2)\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)))))\end{gathered} \tag{9}$$

Assume the following.

$$\begin{gathered}k18\_mod\_2 = g6\_algstr\_0\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)\ k13\_mod\_2\\ k14\_mod\_2\ k16\_mod\_2\ k17\_mod\_2\end{gathered} \tag{10}$$

Assume the following.

$$k17\_mod\_2 = k6\_numbers \tag{11}$$

Assume the following.

$$k16\_mod\_2 = np\_\_1 \tag{12}$$

Assume the following.

$$\begin{gathered}\forall X0.(l3\_algstr\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\\ X0\ X1\ X2 = k5\_binop\_1\ (u1\_struct\_0\ X0)\ (u2\_algstr\_0\ X0)\ X1\ X2)))\end{gathered} \tag{13}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ (k2\_zfmisc\_1\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))))))\Rightarrow((X0 = k14\_mod\_2)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow(k5\_binop\_1\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2)\ X0\ X1\ X2 = k12\_mod\_2\ X1\ X2)))) \tag{14}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_enumset1\ k6\_numbers\ np\_\_1\ np\_\_2))\Rightarrow(((X1 = k6\_numbers)\Rightarrow(k12\_mod\_2\ X0\ X1 = k6\_numbers))\wedge(((X0 = k6\_numbers)\Rightarrow(k12\_mod\_2\ X0\ X1 = k6\_numbers))\wedge(((X1 = np\_\_1)\Rightarrow(k12\_mod\_2\ X0\ X1 = X0))\wedge(((X0 = np\_\_1)\Rightarrow(k12\_mod\_2\ X0\ X1 = X1))\wedge(((X0 = np\_\_2)\wedge(X1 = np\_\_2))\Rightarrow(k12\_mod\_2\ X0\ X1 = np\_\_1))))))) \tag{15}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0)\Rightarrow((v36\_algstr\_0\ X0)\Rightarrow(X0 = g6\_algstr\_0\ (u1\_struct\_0\ X0)\ (u1\_algstr\_0\ X0)\ (u2\_algstr\_0\ X0)\ (u3\_struct\_0\ X0)\ (u2\_struct\_0\ X0))) \tag{16}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ k18\_mod\_2))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ k18\_mod\_2))\Rightarrow((X1 = np\_\_1)\Rightarrow((k6\_algstr\_0\ k18\_mod\_2\ X0\ X1 = X0)\wedge(k6\_algstr\_0\ k18\_mod\_2\ X1\ X0 = X0))))$$