l26_bcialg_4 (TMahXMCei4YdHgvU1pBC51j6BfZ7Mibt3Vb)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v3\_bcialg\_1 : \iota \Rightarrow o$ be given. Let $v4\_bcialg\_1 : \iota \Rightarrow o$ be given. Let $v5\_bcialg\_1 : \iota \Rightarrow o$ be given. Let $v7\_bcialg\_1 : \iota \Rightarrow o$ be given. Let $v2\_bcialg\_4 : \iota \Rightarrow o$ be given. Let $l1\_bcialg\_4 : \iota \Rightarrow o$ be given. Let $v2\_binop\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_bcialg\_4 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_bcialg\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_bcialg\_1\ X0) \wedge ((v4\_bcialg\_1\ X0) \wedge ((v5\_bcialg\_1\ X0) \wedge ((v7\_bcialg\_1\ X0) \wedge ((v2\_bcialg\_4\ X0) \wedge (l1\_bcialg\_4\ X0)))))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (k1\_bcialg\_4\ X0\ (k1\_bcialg\_4\ X0\ X1\ X2)\ X3 = k1\_bcialg\_4\ X0\ X1\ (k1\_bcialg\_4\ X0\ X2\ X3))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0))))) \wedge ((m1\_subset\_1\ X2\ X0) \wedge (m1\_subset\_1\ X3\ X0))) \Rightarrow (k5\_binop\_1\ X0\ X1\ X2\ X3 = k1\_binop\_1\ X1\ X2\ X3) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)))))) \wedge ((m1\_subset\_1\ X2\ X0) \wedge (m1\_subset\_1\ X3\ X0))) \Rightarrow (k3\_binop\_1\ X0\ X1\ X2\ X3 = k1\_binop\_1\ X1\ X2\ X3) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_bcialg\_4\ X0)\Rightarrow((v1\_funct\_1\ (u1\_bcialg\_4\ X0))\wedge ((v1\_funct\_2\ (u1\_bcialg\_4\ X0)\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ (u1\_bcialg\_4\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X1)\wedge ((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)))))\wedge((m1\_subset\_1\ X2\ X0)\wedge (m1\_subset\_1\ X3\ X0)))\Rightarrow(m1\_subset\_1\ (k3\_binop\_1\ X0\ X1\ X2\ X3)\ X0) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0)))))\Rightarrow((v2\_binop\_1\ X1\ X0)\Leftrightarrow(\forall X2.(m1\_subset\_1\ X2\ X0)\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ X0)\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ X0)\Rightarrow(k3\_binop\_1\ X0\ X1\ X2\ (k3\_binop\_1\ X0\ X1\ X3\ X4) = k3\_binop\_1\ X0\ X1\ (k3\_binop\_1\ X0\ X1\ X2\ X3)\ X4))))) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_bcialg\_4\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k1\_bcialg\_4\ X0\ X1\ X2 = k5\_binop\_1\ (u1\_struct\_0\ X0)\ (u1\_bcialg\_4\ X0)\ X1\ X2))) \tag{7}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_bcialg\_1\ X0)\wedge((v4\_bcialg\_1\ X0)\wedge((v5\_bcialg\_1\ X0)\wedge((v7\_bcialg\_1\ X0)\wedge((v2\_bcialg\_4\ X0)\wedge (l1\_bcialg\_4\ X0)))))))\Rightarrow(v2\_binop\_1\ (u1\_bcialg\_4\ X0)\ (u1\_struct\_0\ X0))$$