t15_bcialg_3 (TM-MeUiYnT6WXRVscsYjDkw1BxRg71yq4ubu)

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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 $v8\_bcialg\_1 : \iota \Rightarrow o$ be given. Let $l2\_bcialg\_1 : \iota \Rightarrow o$ be given. Let $v5\_bcialg\_3 : \iota \Rightarrow o$ be given. Let $v4\_bcialg\_3 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_bcialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_bcialg\_1\ X0) \wedge ((v4\_bcialg\_1\ X0) \wedge ((v5\_bcialg\_1\ X0) \wedge ((v7\_bcialg\_1\ X0) \wedge (l2\_bcialg\_1\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (k1\_bcialg\_1\ X0\ X1\ (k4\_struct\_0\ X0) = X1)) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_bcialg\_1\ X0) \wedge ((v4\_bcialg\_1\ X0) \wedge ((v5\_bcialg\_1\ X0) \wedge ((v7\_bcialg\_1\ X0) \wedge (l2\_bcialg\_1\ X0)))))) \Rightarrow ((v5\_bcialg\_3\ X0) \Leftrightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (k1\_bcialg\_1\ X0\ (k1\_bcialg\_1\ X0\ X1\ (k1\_bcialg\_1\ X0\ X1\ X2))\ (k1\_bcialg\_1\ X0\ (k4\_struct\_0\ X0)\ (k1\_bcialg\_1\ X0\ X1\ X2)) = k1\_bcialg\_1\ X0\ X2\ (k1\_bcialg\_1\ X0\ X2\ X1))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l2\_bcialg\_1\ X0)) \Rightarrow ((v5\_bcialg\_1\ X0) \Leftrightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (k1\_bcialg\_1\ X0\ X1\ X1 = k4\_struct\_0\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_bcialg\_1\ X0)\wedge((v4\_bcialg\_1\ X0)\wedge((v5\_bcialg\_1\ X0)\wedge((v7\_bcialg\_1\ X0)\wedge(l2\_bcialg\_1\ X0)))))\Rightarrow((v4\_bcialg\_3\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((k1\_bcialg\_1\ X0\ X1\ X2 = k4\_struct\_0\ X0)\Rightarrow(X1 = k1\_bcialg\_1\ X0\ X2\ (k1\_bcialg\_1\ X0\ X2\ X1))))))) \tag{4}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_bcialg\_1\ X0)\wedge((v4\_bcialg\_1\ X0)\wedge((v5\_bcialg\_1\ X0)\wedge((v7\_bcialg\_1\ X0)\wedge((v8\_bcialg\_1\ X0)\wedge(l2\_bcialg\_1\ X0)))))))\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge((v3\_bcialg\_1\ X0)\wedge((v4\_bcialg\_1\ X0)\wedge((v5\_bcialg\_1\ X0)\wedge((v7\_bcialg\_1\ X0)\wedge((v5\_bcialg\_3\ X0)\wedge(l2\_bcialg\_1\ X0)))))))\Rightarrow(v4\_bcialg\_3\ X0))$$