t11_bcialg_6 (TMFEdzM3TUbeJsVLsxjM1XqWqNBvkDQ3eyX)

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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 $l2\_bcialg\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k4\_bcialg\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $k3\_bcialg\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k23\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_bcialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_bcialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_bcialg\_1 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $r1\_bcialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_bcialg\_1\ X0) \wedge ((v4\_bcialg\_1\ X0) \wedge ((v5\_bcialg\_1\ X0) \wedge ((v7\_bcialg\_1\ X0) \wedge (l2\_bcialg\_1\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (k3\_bcialg\_6\ X0\ np\_\_1\ X1 = X1)) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_bcialg\_1\ X0) \wedge ((v4\_bcialg\_1\ X0) \wedge ((v5\_bcialg\_1\ X0) \wedge ((v7\_bcialg\_1\ X0) \wedge (l2\_bcialg\_1\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (k3\_bcialg\_6\ X0\ (k23\_binop\_2\ X2\ np\_\_1)\ X1 = k1\_bcialg\_1\ X0\ X1\ (k2\_bcialg\_1\ X0\ (k3\_bcialg\_6\ X0\ X2\ X1))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_bcialg\_1\ X0) \wedge ((v4\_bcialg\_1\ X0) \wedge ((v5\_bcialg\_1\ X0) \wedge ((v7\_bcialg\_1\ X0) \wedge (l2\_bcialg\_1\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (k1\_bcialg\_1\ X0\ X1\ (k4\_struct\_0\ X0) = X1)) \tag{3}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{4}$$

Assume the following.

$$\forall X0 : \iota \Rightarrow o.\forall X1.((X0\ X1)\wedge(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(((r1\_xxreal\_0\ X1\ X2)\wedge(X0\ X2))\Rightarrow(X0\ (k1\_nat\_1\ X2\ np\_\_1)))))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow((r1\_xxreal\_0\ X1\ X2)\Rightarrow(X0\ X2))) \tag{5}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(k23\_binop\_2\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(m1\_subset\_1\ X1\ k5\_numbers))\Rightarrow(k1\_nat\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{8}$$

Assume the following.

$$\forall X0.(l2\_bcialg\_1\ X0)\Rightarrow((l1\_bcialg\_1\ X0)\wedge(l2\_struct\_0\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(m1\_subset\_1\ (k4\_struct\_0\ X0)\ (u1\_struct\_0\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l2\_bcialg\_1\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k2\_bcialg\_1\ X0\ X1 = k1\_bcialg\_1\ X0\ (k4\_struct\_0\ X0)\ X1)) \tag{11}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_bcialg\_1\ X0)\wedge((v4\_bcialg\_1\ X0)\wedge((v5\_bcialg\_1\ X0)\wedge((v7\_bcialg\_1\ X0)\wedge(l2\_bcialg\_1\ X0))))))\Rightarrow(k4\_bcialg\_1\ X0 = ReplSep\ (toset\ (\lambda X1 : \iota.m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)))\ (\lambda X1 : \iota.r1\_bcialg\_1\ X0\ (k4\_struct\_0\ X0)\ X1)\ (\lambda X1 : \iota.X1)) \tag{12}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l2\_bcialg\_1\ X0))\Rightarrow(\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((r1\_bcialg\_1\ X0\ X1\ X2)\Leftrightarrow(k1\_bcialg\_1\ X0\ X1\ X2 = k4\_struct\_0\ X0)))) \tag{13}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{14}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_bcialg\_1\ X0)\wedge((v4\_bcialg\_1\ X0)\wedge((v5\_bcialg\_1\ X0)\wedge((v7\_bcialg\_1\ X0)\wedge(l2\_bcialg\_1\ X0))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(((X1\in k4\_bcialg\_1\ X0)\wedge(r1\_xxreal\_0\ np\_\_1\ X2))\Rightarrow(k3\_bcialg\_6\ X0\ X2\ X1 = X1))))$$