t19_bcialg_6 (TMXCKBBTEWm-PJgy4PtSREo2PAL9VgCaG93U)

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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 $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_bcialg\_1 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k3\_bcialg\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19\_binop\_2 : \iota \Rightarrow \iota$ be given. Let $k2\_bcialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_bcialg\_1\ X0) \wedge ((v4\_bcialg\_1\ X0) \wedge ((v5\_bcialg\_1\ X0) \wedge ((v7\_bcialg\_1\ X0) \wedge (l2\_bcialg\_1\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (k2\_bcialg\_1\ X0\ X1 \in k5\_bcialg\_1\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_bcialg\_1\ X0) \wedge ((v4\_bcialg\_1\ X0) \wedge ((v5\_bcialg\_1\ X0) \wedge ((v7\_bcialg\_1\ X0) \wedge (l2\_bcialg\_1\ X0)))))) \Rightarrow (k4\_struct\_0\ X0 \in k5\_bcialg\_1\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_bcialg\_1\ X0) \wedge ((v4\_bcialg\_1\ X0) \wedge ((v5\_bcialg\_1\ X0) \wedge ((v7\_bcialg\_1\ X0) \wedge (l2\_bcialg\_1\ X0)))))) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ (u1\_struct\_0\ X0)\ (k5\_bcialg\_1\ X0)) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (k3\_bcialg\_6\ X0\ X2\ (k2\_bcialg\_1\ X0\ X1) = k2\_bcialg\_1\ X0\ (k3\_bcialg\_6\ X0\ X2\ X1)))) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_bcialg\_1\ X0)\wedge((v4\_bcialg\_1\ X0)\wedge((v5\_bcialg\_1\ X0)\wedge((v7\_bcialg\_1\ X0)\wedge(l2\_bcialg\_1\ X0)))))\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ (u1\_struct\_0\ X0)\ (k5\_bcialg\_1\ X0))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(k3\_bcialg\_6\ X0\ X2\ (k2\_bcialg\_1\ X0\ X1) = k3\_bcialg\_6\ X0\ (k19\_binop\_2\ X2)\ X1))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Rightarrow(m1\_subset\_1\ X2\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_bcialg\_1\ X0)\wedge((v4\_bcialg\_1\ X0)\wedge((v5\_bcialg\_1\ X0)\wedge((v7\_bcialg\_1\ X0)\wedge(l2\_bcialg\_1\ X0)))))\Rightarrow((\neg v1\_xboole\_0\ (k5\_bcialg\_1\ X0))\wedge(m1\_subset\_1\ (k5\_bcialg\_1\ X0)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \tag{9}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_bcialg\_1\ X0)\wedge((v4\_bcialg\_1\ X0)\wedge((v5\_bcialg\_1\ X0)\wedge((v7\_bcialg\_1\ X0)\wedge(l2\_bcialg\_1\ X0)))))\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ (u1\_struct\_0\ X0)\ (k5\_bcialg\_1\ X0))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(k3\_bcialg\_6\ X0\ (k19\_binop\_2\ X2)\ (k2\_bcialg\_1\ X0\ X1) = k2\_bcialg\_1\ X0\ (k3\_bcialg\_6\ X0\ (k19\_binop\_2\ X2)\ X1))))$$