

t40_bcialg_5 (TMZQBNNXXWMPQUHKBNzn-
VHP1dqPfGPt5xwB)

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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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_bcialg_1 : \iota \Rightarrow \iota$ be given. Let $v8_bcialg_1 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_bcialg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k2_bcialg_1 X0 \\ X1 \in k5_bcialg_1 X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((X1 \in k5_bcialg_1 \\ X0) \Leftrightarrow (k2_bcialg_1 X0 (k2_bcialg_1 X0 X1) = X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ (k4_struct_0 X0 \in k5_bcialg_1 X0) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\exists X1.m1_subset_1 X1 X0 \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge((v3_bcialg_1 X0)\wedge((v4_bcialg_1 \\ X0)\wedge((v5_bcialg_1 X0)\wedge((v7_bcialg_1 X0)\wedge(l2_bcialg_1 X0))))))\Rightarrow \\ ((\neg v1_xboole_0 (k5_bcialg_1 X0))\wedge(m1_subset_1 (k5_bcialg_1 \\ X0) (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (7) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge(l2_bcialg_1 X0))\Rightarrow((v8_bcialg_1 \\ X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k2_bcialg_1 \\ X0 X1 = k4_struct_0 X0))) \quad (8) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow \\ (X2 = X0)) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge((v3_bcialg_1 X0)\wedge((v4_bcialg_1 \\ X0)\wedge((v5_bcialg_1 X0)\wedge((v7_bcialg_1 X0)\wedge(l2_bcialg_1 X0))))))\Rightarrow \\ (\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))))\Rightarrow(\forall X2.((\neg v2_struct_0 X2)\wedge((v3_bcialg_1 \\ X2)\wedge((v4_bcialg_1 X2)\wedge((v5_bcialg_1 X2)\wedge((v7_bcialg_1 X2)\wedge \\ (l2_bcialg_1 X2))))))\Rightarrow((X1 = k5_bcialg_1 X2)\Rightarrow(((\neg v2_struct_0 \\ X2)\wedge((v3_bcialg_1 X2)\wedge((v4_bcialg_1 X2)\wedge((v5_bcialg_1 X2)\wedge \\ ((v7_bcialg_1 X2)\wedge((v8_bcialg_1 X2)\wedge(l2_bcialg_1 X2))))))\Leftrightarrow \\ (X1 = k1_tarski (k4_struct_0 X2)))))) \end{aligned}$$