

t14_bcialg_6 (TM- FuroWuD7n9Qf49Y6mSBHtAkrQrQavqBnL)

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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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k2_bcialg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_1 : \iota$ be given. Let $k1_bcialg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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. Let $v1_int_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (1)$$

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.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((X1 \in k5_bcialg_1 X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k2_bcialg_1 X0 (k1_bcialg_1 X0 X2 X1) = k1_bcialg_1 X0 X1 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (v7_ordinal1 X2) \Rightarrow (k3_bcialg_6 X0 (k23_binop_2 X2 np_1) X1 = k1_bcialg_1 X0 X1 (k2_bcialg_1 X0 (k3_bcialg_6 X0 X2 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0)) \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \wedge ((v1_int_1 X1) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k3_bcialg_6 X0 X1 X2) (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l2_bcialg_1 X0)) \wedge (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k2_bcialg_1 X0 X1) (u1_struct_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (v1_int_1 X0) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & (\forall X1. (m2_subset_1 X1 (u1_struct_0 X0) (k5_bcialg_1 X0)) \Rightarrow \\ & (\forall X2. (v7_ordinal1 X2) \Rightarrow (k2_bcialg_1 X0 (k3_bcialg_6 X0 \\ & (k23_binop_2 X2 np_1) X1) = k1_bcialg_1 X0 (k2_bcialg_1 X0 (k3_bcialg_6 X0 X2 X1)) X1))) \end{aligned}$$