

t9_bciideal

(TMaJdosh3fPsbzNCrJA3DR4CxL8JjERVswR)

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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 $m2_bcialg_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_bcialg_1 : \iota \Rightarrow \iota$ 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 $k4_bcialg_1 : \iota \Rightarrow \iota$ be given. Let $k1_bcialg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. 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. Assume the following.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (v1_xboole_0 X1) \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & (\forall X1. (m2_subset_1 X1 (u1_struct_0 X0) (k5_bcialg_1 X0)) \Rightarrow \\ & (\forall X2. (m2_subset_1 X2 (u1_struct_0 X0) (k4_bcialg_1 X0)) \Rightarrow \\ & (k1_bcialg_1 X0 X1 X2 = X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Rightarrow(m1_subset_1 X2 X0)) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v3_bcialg_1 X0)\wedge((v4_bcialg_1 X0)\wedge((v5_bcialg_1 X0)\wedge((v7_bcialg_1 X0)\wedge(l2_bcialg_1 X0))))))\Rightarrow(\forall X1.(m2_bcialg_1 X1 X0)\Rightarrow((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v3_bcialg_1 X0)\wedge((v4_bcialg_1 X0)\wedge((v5_bcialg_1 X0)\wedge((v7_bcialg_1 X0)\wedge(l2_bcialg_1 X0))))))\Rightarrow((\neg v1_xboole_0 (k4_bcialg_1 X0))\wedge(m1_subset_1 (k4_bcialg_1 X0) (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l2_bcialg_1 X0))\Rightarrow((v5_bcialg_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k1_bcialg_1 X0 X1 X1 = k4_struct_0 X0))) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v3_bcialg_1 X0)\wedge((v4_bcialg_1 X0)\wedge((v5_bcialg_1 X0)\wedge((v7_bcialg_1 X0)\wedge(l2_bcialg_1 X0))))))\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow((m2_bcialg_1 X1 X0)\Leftrightarrow((k4_struct_0 X0 \in X1)\wedge(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(((k1_bcialg_1 X0 X2 X3 \in X1)\wedge(X3 \in X1))\Rightarrow(X2 \in X1))))))) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (12)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v3_bcialg_1 X0)\wedge((v4_bcialg_1 X0)\wedge((v5_bcialg_1 X0)\wedge((v7_bcialg_1 X0)\wedge(l2_bcialg_1 X0))))))\Rightarrow((m2_bcialg_1 (k5_bcialg_1 X0) X0)\Rightarrow(\forall X1.(m2_subset_1 X1 (u1_struct_0 X0) (k4_bcialg_1 X0))\Rightarrow(\forall X2.(m2_subset_1 X2 (u1_struct_0 X0) (k5_bcialg_1 X0))\Rightarrow((k1_bcialg_1 X0 X1 X2 \in k5_bcialg_1 X0)\Rightarrow(X1 = k4_struct_0 X0))))))$$