

t50_bciideal
(TMND7qX2kgqo7BMqcggmM1w1UBxKHUj4nuB)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_bciideal_1 : \iota \Rightarrow o$ be given. Let $v4_bciideal_1 : \iota \Rightarrow o$ be given. Let $v5_bciideal_1 : \iota \Rightarrow o$ be given. Let $v7_bciideal_1 : \iota \Rightarrow o$ be given. Let $v8_bciideal_1 : \iota \Rightarrow o$ be given. Let $l2_bciideal_1 : \iota \Rightarrow o$ be given. Let $m2_bciideal_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m3_bciideal : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_bciideal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $l1_bciideal_1 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. (((\neg v2_struct_0 X0) \wedge ((v3_bciideal_1 X0) \wedge ((v4_bciideal_1 X0) \wedge ((v5_bciideal_1 X0) \wedge ((v7_bciideal_1 X0) \wedge (l2_bciideal_1 X0))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k1_bciideal_1 X0 X1 (k4_struct_0 X0) = X1)) \quad (3)$$

Assume the following.

$$\forall X0. (((\neg v2_struct_0 X0) \wedge ((v3_bciideal_1 X0) \wedge ((v4_bciideal_1 X0) \wedge ((v5_bciideal_1 X0) \wedge ((v7_bciideal_1 X0) \wedge ((v8_bciideal_1 X0) \wedge (l2_bciideal_1 X0))))))) \Rightarrow (\forall X1. (m3_bciideal X1 X0) \Rightarrow ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))) \quad (4)$$

Assume the following.

$$\forall X0. (((\neg v2_struct_0 X0) \wedge ((v3_bciideal_1 X0) \wedge ((v4_bciideal_1 X0) \wedge ((v5_bciideal_1 X0) \wedge ((v7_bciideal_1 X0) \wedge (l2_bciideal_1 X0))))))) \Rightarrow (\forall X1. (m2_bciideal_1 X1 X0) \Rightarrow ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))) \quad (5)$$

Assume the following.

$$\forall X0.(l2_bcialg_1 X0) \Rightarrow ((l1_bcialg_1 X0) \wedge (l2_struct_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((l1_bcialg_1 X0) \wedge ((m1_subset_1 \\ & X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 \\ & (k1_bcialg_1 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge ((v8_bcialg_1 X0) \wedge \\ & (l2_bcialg_1 X0))))))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((m3_bciideal X1 X0) \Leftrightarrow ((k4_struct_0 \\ & X0 \in X1) \wedge (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow (((k1_bcialg_1 X0 (k1_bcialg_1 X0 X2 (k1_bcialg_1 \\ & X0 X3 X2)) X4 \in X1) \wedge (X4 \in X1)) \Rightarrow (X2 \in X1)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & (\forall X1. ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \Rightarrow ((m2_bcialg_1 X1 X0) \Leftrightarrow ((k4_struct_0 X0 \in X1) \wedge \\ & (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow (((k1_bcialg_1 X0 X2 X3 \in X1) \wedge (X3 \in X1)) \Rightarrow (X2 \in \\ & X1))))))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge ((v8_bcialg_1 X0) \wedge \\ & (l2_bcialg_1 X0))))))) \Rightarrow (\forall X1. (m2_bcialg_1 X1 X0) \Rightarrow ((m3_bciideal \\ & X1 X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((k1_bcialg_1 X0 X2 (k1_bcialg_1 \\ & X0 X3 X2) \in X1) \Rightarrow (X2 \in X1)))))) \end{aligned}$$