

t15_bcialg_5 (TMWiBi- WFEy7KJgRPxhpjccL8N7sWAqaQXUt)

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Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_bcialg_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 \\
& X2 k1_numbers k5_numbers) \Rightarrow (\forall X3.(m2_subset_1 X3 k1_numbers \\
& k5_numbers) \Rightarrow (\forall X4.(m1_bcialg_5 X4 X0 X1 X2 X3) \Rightarrow (\forall X5. \\
& (m2_subset_1 X5 k1_numbers k5_numbers) \Rightarrow (m1_bcialg_5 X4 (k2_nat_1 \\
& X0 X5) X1 X2 (k2_nat_1 X3 X5))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\
& X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\
& (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2. \\
& (m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (\forall X3.(m2_subset_1 \\
& X3 k1_numbers k5_numbers) \Rightarrow (\forall X4.(m2_subset_1 X4 k1_numbers \\
& k5_numbers) \Rightarrow ((m1_bcialg_5 X0 X1 X2 X3 X4) \Leftrightarrow (m1_bcialg_5 X0 X3 X4 \\
& X1 X2))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{3}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{4}$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 \ X0 \\ & k5_numbers) \wedge ((m1_subset_1 \ X1 \ k5_numbers) \wedge ((m1_subset_1 \ X2 \ k5_numbers) \wedge \\ & (m1_subset_1 \ X3 \ k5_numbers)))) \Rightarrow (\forall X4. (m1_bcialg_5 \ X4 \ X0 \\ & X1 \ X2 \ X3) \Rightarrow ((\neg v2_struct_0 \ X4) \wedge ((v3_bcialg_1 \ X4) \wedge ((v4_bcialg_1 \\ & X4) \wedge ((v5_bcialg_1 \ X4) \wedge ((v7_bcialg_1 \ X4) \wedge (l2_bcialg_1 \ X4))))))) \end{aligned} \quad (6)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k5_numbers) \wedge (v7_ordinal1 \ X1)) \Rightarrow (m2_subset_1 \ (k2_nat_1 \ X0 \ X1) \ k1_numbers \ k5_numbers) \quad (8)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (9)$$

Assume the following.

$$\forall X0. (v1_xboole_0 \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)) \Rightarrow (v1_xboole_0 \ X1)) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m2_subset_1 \ X0 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X1. \\ & (m2_subset_1 \ X1 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X3. (m2_subset_1 \ X3 \ k1_numbers \\ & k5_numbers) \Rightarrow (\forall X4. (m1_bcialg_5 \ X4 \ X0 \ X1 \ X2 \ X3) \Rightarrow (\forall X5. \\ & (m2_subset_1 \ X5 \ k1_numbers \ k5_numbers) \Rightarrow (m1_bcialg_5 \ X4 \ X0 \ (k2_nat_1 \\ & X1 \ X5) \ (k2_nat_1 \ X2 \ X5) \ X3)))))) \end{aligned}$$