

t26_bcialg_4

(TMWHsd4YGce2FtrZcaQkKM56hvKWGC1sCoa)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $v2_bcialg_4 : \iota \Rightarrow o$ be given. Let $l1_bcialg_4 : \iota \Rightarrow o$ be given. Let $k6_bcialg_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_bcialg_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $l2_bcialg_1 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge ((v2_bcialg_4 X0) \wedge \\ & (l1_bcialg_4 X0))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow ((k1_bcialg_4 X0 (k4_struct_0 X0) X1 = X1) \wedge (k1_bcialg_4 X0 \\ & X1 (k4_struct_0 X0) = X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. ((\neg v2_struct_0 \\ & X1) \wedge ((v3_bcialg_1 X1) \wedge ((v4_bcialg_1 X1) \wedge ((v5_bcialg_1 X1) \wedge \\ & ((v7_bcialg_1 X1) \wedge ((v2_bcialg_4 X1) \wedge (l1_bcialg_4 X1))))))) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (k6_bcialg_4 X1 \\ & X2 (k2_nat_1 X0 np_1) = k1_bcialg_4 X1 (k6_bcialg_4 X1 X2 X0) X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. ((\neg v2_struct_0 \\ & X1) \wedge ((v3_bcialg_1 X1) \wedge ((v4_bcialg_1 X1) \wedge ((v5_bcialg_1 X1) \wedge \\ & ((v7_bcialg_1 X1) \wedge ((v2_bcialg_4 X1) \wedge (l1_bcialg_4 X1))))))) \Rightarrow \\ & (k6_bcialg_4 X1 (k4_struct_0 X1) (k2_nat_1 X0 np_1) = k4_struct_0 \\ & X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (l1_bcialg_4 X0) \Rightarrow ((l2_bcialg_1 X0) \wedge (l2_struct_0 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v3_bcialg_1 \\ & X0)\wedge((v4_bcialg_1 X0)\wedge((v5_bcialg_1 X0)\wedge((v7_bcialg_1 X0)\wedge \\ & ((v2_bcialg_4 X0)\wedge(l1_bcialg_4 X0))))))\wedge((m1_subset_1 X1 (\\ & u1_struct_0 X0))\wedge(m1_subset_1 X2 k5_numbers)))\Rightarrow(m1_subset_1 \\ & (k6_bcialg_4 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(m1_subset_1 (k4_struct_0 X0) (u1_struct_0 X0)) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.((\neg v2_struct_0 \\ & X1)\wedge((v3_bcialg_1 X1)\wedge((v4_bcialg_1 X1)\wedge((v5_bcialg_1 X1)\wedge \\ & ((v7_bcialg_1 X1)\wedge((v2_bcialg_4 X1)\wedge(l1_bcialg_4 X1))))))\Rightarrow \\ & (k6_bcialg_4 X1 (k4_struct_0 X1) X0 = k4_struct_0 X1)) \end{aligned}$$