

t25_bcialg_6 (TMRzNLzAL- rmEDHK95VV6RTRp6T8n7cahVDV)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_bcialg_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_bcialg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_bcialg_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $l1_bcialg_1 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ 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 $r1_bcialg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ &X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ &(\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (v7_ordinal1 \\ &X2) \Rightarrow (k2_bcialg_1 X0 (k3_bcialg_6 X0 X2 X1) = k2_bcialg_1 X0 (k3_bcialg_6 \\ &X0 X2 (k2_bcialg_1 X0 (k2_bcialg_1 X0 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0. (l2_bcialg_1 X0) \Rightarrow ((l1_bcialg_1 X0) \wedge (l2_struct_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0. (l2_struct_0 X0) \Rightarrow (m1_subset_1 (k4_struct_0 X0) (u1_struct_0 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (&((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 \\ &X0) \wedge ((v4_bcialg_1 X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge \\ &(l2_bcialg_1 X0)))))) \wedge ((v1_int_1 X1) \wedge (m1_subset_1 X2 (u1_struct_0 \\ &X0)))) \Rightarrow (m1_subset_1 (k3_bcialg_6 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l2_bcialg_1 X0))\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k2_bcialg_1 X0 X1) (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} &\forall X0.((\neg v2_struct_0 X0)\wedge((v3_bcialg_1 X0)\wedge((v4_bcialg_1 X0)\wedge((v5_bcialg_1 X0)\wedge((v7_bcialg_1 X0)\wedge(l2_bcialg_1 X0))))))\Rightarrow \\ &(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow((v1_bcialg_6 X1 X0)\Leftrightarrow(\exists X2.(m1_subset_1 X2 k5_numbers)\wedge((X2\neq k6_numbers)\wedge(k3_bcialg_6 X0 X2 X1 \in k4_bcialg_1 X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l2_bcialg_1 X0))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k2_bcialg_1 X0 X1 = k1_bcialg_1 X0 (k4_struct_0 X0) X1)) \quad (8)$$

Assume the following.

$$\begin{aligned} &\forall X0.((\neg v2_struct_0 X0)\wedge((v3_bcialg_1 X0)\wedge((v4_bcialg_1 X0)\wedge((v5_bcialg_1 X0)\wedge((v7_bcialg_1 X0)\wedge(l2_bcialg_1 X0))))))\Rightarrow \\ &(k4_bcialg_1 X0 = ReplSep (toset (\lambda X1 : \iota.m1_subset_1 X1 (u1_struct_0 X0))) (\lambda X1 : \iota.r1_bcialg_1 X0 (k4_struct_0 X0) X1) (\lambda X1 : \iota.X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} &\forall X0.((\neg v2_struct_0 X0)\wedge(l2_bcialg_1 X0))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((r1_bcialg_1 X0 X1 X2)\Leftrightarrow(k1_bcialg_1 X0 X1 X2 = k4_struct_0 X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_int_1 X0) \quad (12)$$

Theorem 1

$$\begin{aligned} &\forall X0.((\neg v2_struct_0 X0)\wedge((v3_bcialg_1 X0)\wedge((v4_bcialg_1 X0)\wedge((v5_bcialg_1 X0)\wedge((v7_bcialg_1 X0)\wedge(l2_bcialg_1 X0))))))\Rightarrow \\ &(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow((v1_bcialg_6 X1 X0)\Rightarrow(v1_bcialg_6 (k2_bcialg_1 X0 (k2_bcialg_1 X0 X1) X0))) \end{aligned}$$