

l80_bcialg_1

(TMaW1DdZZZzmVAqdiA3vE6taDMm4t3HwmBh)

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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 $k2_bcialg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_bcialg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_bcialg_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((X1 \in k5_bcialg_1 \\ & X0) \Leftrightarrow (k2_bcialg_1 X0 (k2_bcialg_1 X0 X1) = X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((X1 \in k5_bcialg_1 \\ & X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k1_bcialg_1 \\ & X0 (k2_bcialg_1 X0 X2) (k2_bcialg_1 X0 X1) = k1_bcialg_1 X0 X1 X2)))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & ((\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k2_bcialg_1 \\ & X0 X1 = X1)) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k1_bcialg_1 X0 X1 X2 = k1_bcialg_1 \\ & X0 X2 X1)))) \end{aligned}$$