

t45_bcialg_2

(TMT5pF5kvXXwgs6oSFd3qQA5oEu4kCv3C2t)

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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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_bcialg_2 : \iota \Rightarrow \iota$ be given. Let $k5_bcialg_2 : \iota \Rightarrow \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_bcialg_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m3_bcialg_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_bcialg_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & (\forall X1.((v1_partfun1 X1 (u1_struct_0 X0)) \wedge ((v3_relat_2 \\ & X1) \wedge ((v8_relat_2 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0))))))) \Rightarrow ((m1_bcialg_2 X1 X0) \Leftrightarrow \\ & ((m3_bcialg_2 X1 X0) \wedge (m2_bcialg_2 X1 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & (\forall X1.(m1_bcialg_2 X1 X0) \Rightarrow ((v1_partfun1 X1 (u1_struct_0 \\ & X0)) \wedge ((v3_relat_2 X1) \wedge ((v8_relat_2 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_bcialg_1 X0) \wedge ((v4_bcialg_1 \\ & X0) \wedge ((v5_bcialg_1 X0) \wedge ((v7_bcialg_1 X0) \wedge (l2_bcialg_1 X0)))))) \Rightarrow \\ & (k5_bcialg_2 X0 = \text{ReplSep} (\text{toset} (\lambda X1 : \iota. m2_bcialg_2 X1 X0)) \\ & (\lambda X1 : \iota. \text{True}) (\lambda X1 : \iota. X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v3_bciAlg_1 X0) \wedge ((v4_bciAlg_1 \\ X0) \wedge ((v5_bciAlg_1 X0) \wedge ((v7_bciAlg_1 X0) \wedge (l2_bciAlg_1 X0)))))) \Rightarrow & (5) \\ (k4_bciAlg_2 X0 = ReplSep (toset (\lambda X1 : \iota.m1_bciAlg_2 X1 X0)) & \\ (\lambda X1 : \iota.True) (\lambda X1 : \iota.X1)) & \end{aligned}$$

Theorem 1

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v3_bciAlg_1 X0) \wedge ((v4_bciAlg_1 \\ X0) \wedge ((v5_bciAlg_1 X0) \wedge ((v7_bciAlg_1 X0) \wedge (l2_bciAlg_1 X0)))))) \Rightarrow & \\ (r1_tarSKI (k4_bciAlg_2 X0) (k5_bciAlg_2 X0)) & \end{aligned}$$