

t38_twoscomp
(TMEneP8uPrM2K4H3q9ULko45KcnpzzAyKYE)

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Let $v1_xtuple_0 : \iota \Rightarrow o$ be given. Let $k3_msafree2 : \iota \Rightarrow \iota$ be given. Let $k40_twoscomp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_twoscomp : \iota$ be given. Let $k3_twoscomp : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k2_msafree2 : \iota \Rightarrow \iota$ be given. Let $k5_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_circcomb : \iota \Rightarrow o$ be given. Let $v2_circcomb : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $k2_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k37_twoscomp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v1_msualg_1 : \iota \Rightarrow o$ be given. Let $v3_circcomb : \iota \Rightarrow o$ be given. Let $k34_twoscomp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\ & X1))) \Rightarrow ((k2_msafree2 (k5_circcomb X0 X1) = k10_xtuple_0 X1) \wedge (k3_msafree2 \\ & (k5_circcomb X0 X1) = k1_tarski (k4_tarski X1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_circcomb X0) \wedge ((v2_circcomb \\ & X0) \wedge (l1_msualg_1 X0)))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v1_circcomb \\ & X1) \wedge ((v2_circcomb X1) \wedge (l1_msualg_1 X1)))) \Rightarrow (k3_msafree2 (k2_circcomb \\ & X0 X1) = k2_xboole_0 (k3_msafree2 X0) (k3_msafree2 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski X0 X1 = k2_xboole_0 (k1_tarski X0) (k1_tarski X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 (k10_finseq_1 X0 X1)) \wedge (v1_funct_1 (k10_finseq_1 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.v1_finseq_1 (k10_finseq_1 X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(&\neg v2_struct_0 (k37_twoscomp X0 X1))\wedge((\\ &\neg v11_struct_0 (k37_twoscomp X0 X1))\wedge((v1_msualg_1 (k37_twoscomp \\ &X0 X1))\wedge((v1_circcomb (k37_twoscomp X0 X1))\wedge((v2_circcomb (k37_twoscomp \\ &X0 X1))\wedge((v3_circcomb (k37_twoscomp X0 X1))\wedge(l1_msualg_1 (k37_twoscomp \\ &X0 X1)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(&\neg v2_struct_0 (k34_twoscomp X0 X1))\wedge((\\ &\neg v11_struct_0 (k34_twoscomp X0 X1))\wedge((v1_msualg_1 (k34_twoscomp \\ &X0 X1))\wedge((v1_circcomb (k34_twoscomp X0 X1))\wedge((v2_circcomb (k34_twoscomp \\ &X0 X1))\wedge((v3_circcomb (k34_twoscomp X0 X1))\wedge(l1_msualg_1 (k34_twoscomp \\ &X0 X1)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k40_twoscomp X0 X1 = k2_circcomb (k34_twoscomp X0 X1) (k37_twoscomp X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k37_twoscomp X0 X1 = k5_circcomb k3_twoscomp (k10_finseq_1 X0 X1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k34_twoscomp X0 X1 = k5_circcomb k15_twoscomp (k10_finseq_1 X0 X1) \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.(&\neg v1_xtuple_0 X0)\Rightarrow(\forall X1.(\neg v1_xtuple_0 X1)\Rightarrow \\ &(k3_msafree2 (k40_twoscomp X0 X1) = k2_tarski (k4_tarski (k10_finseq_1 \\ &X0 X1) k15_twoscomp) (k4_tarski (k10_finseq_1 X0 X1) k3_twoscomp))) \end{aligned}$$