

t1_ftacell1 (TMT-
NwYL3kc3LuFgaFw8T1ooxYDGuoAGEN8G)

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Let $k3_msafree2 : \iota \Rightarrow \iota$ be given. Let $k1_ftacell1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k14_twoscomp : \iota$ be given. Let $k12_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_twoscomp : \iota$ be given. Let $k9_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r1_circcomb : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_msafree2 : \iota \Rightarrow \iota$ 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. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. k2_enumset1 X0 X1 \\ & X2 X3 = k2_xboole_0 (k1_enumset1 X0 X1 X2) (k1_tarski X3) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. k2_xboole_0 (k2_xboole_0 X0 \\ & X1) X2 = k2_xboole_0 X0 (k2_xboole_0 X1 X2) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_circcomb X0) \wedge ((v2_circcomb \\ & X0) \wedge (l1_msualg_1 X0)))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v1_circcomb \\ & X1) \wedge ((v2_circcomb X1) \wedge (l1_msualg_1 X1)))) \Rightarrow (r1_circcomb X0 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.k3_msafree2 (k13_gfacirc1 X0 \\ & X1 X2) = k2_xboole_0 (k2_xboole_0 (k2_xboole_0 (k1_tarski (k4_tarski \\ & (k10_finseq_1 X0 X1) k14_twoscomp)) (k1_tarski (k12_gfacirc1 \\ & X0 X1 X2))) (k1_enumset1 (k4_tarski (k10_finseq_1 X0 X1) k2_twoscomp) \\ & (k4_tarski (k10_finseq_1 X1 X2) k2_twoscomp) (k4_tarski (k10_finseq_1 \\ & X2 X0) k2_twoscomp))) (k1_tarski (k9_gfacirc1 X0 X1 X2)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_xboole_0 (k1_tarski X0) (k1_tarski X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_msualg_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_msualg_1 X1)) \Rightarrow ((r1_circcomb X0 X1) \Rightarrow (\\ & (k3_msafree2 (k2_circcomb X0 X1) = k2_xboole_0 (k3_msafree2 X0) \\ & (k3_msafree2 X1)) \wedge (r1_tarski (k2_msafree2 (k2_circcomb X0 X1)) \\ & (k2_xboole_0 (k2_msafree2 X0) (k2_msafree2 X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(\neg v2_struct_0 (k13_gfacirc1 \\ & X0 X1 X2)) \wedge ((\neg v11_struct_0 (k13_gfacirc1 X0 X1 X2)) \wedge ((v1_msualg_1 \\ & (k13_gfacirc1 X0 X1 X2)) \wedge ((v1_circcomb (k13_gfacirc1 X0 X1 X2)) \wedge \\ & ((v2_circcomb (k13_gfacirc1 X0 X1 X2)) \wedge ((v3_circcomb (k13_gfacirc1 \\ & X0 X1 X2)) \wedge (l1_msualg_1 (k13_gfacirc1 X0 X1 X2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.k1_ftacell1 \\ & X0 X1 X2 X3 X4 = k2_circcomb (k13_gfacirc1 X0 X1 X2) (k13_gfacirc1 \\ & (k12_gfacirc1 X0 X1 X2) X4 X3) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.k3_msafree2 \\ & (k1_ftacell1 X0 X1 X2 X3 X4) = k2_xboole_0 (k2_xboole_0 (k2_xboole_0 \\ & (k2_tarski (k4_tarski (k10_finseq_1 X0 X1) k14_twoscomp) (k12_gfacirc1 \\ & X0 X1 X2)) (k2_enumset1 (k4_tarski (k10_finseq_1 X0 X1) k2_twoscomp) \\ & (k4_tarski (k10_finseq_1 X1 X2) k2_twoscomp) (k4_tarski (k10_finseq_1 \\ & X2 X0) k2_twoscomp) (k9_gfacirc1 X0 X1 X2))) (k2_tarski (k4_tarski \\ & (k10_finseq_1 (k12_gfacirc1 X0 X1 X2) X4) k14_twoscomp) (k12_gfacirc1 \\ & (k12_gfacirc1 X0 X1 X2) X4 X3))) (k2_enumset1 (k4_tarski (k10_finseq_1 \\ & (k12_gfacirc1 X0 X1 X2) X4) k2_twoscomp) (k4_tarski (k10_finseq_1 \\ & X4 X3) k2_twoscomp) (k4_tarski (k10_finseq_1 X3 (k12_gfacirc1 \\ & X0 X1 X2)) k2_twoscomp) (k9_gfacirc1 (k12_gfacirc1 X0 X1 X2) X4 X3)) \end{aligned}$$