

t44_gfacirc1
(TMH2k3P5i5cQrHPpFd95kJ156KZ2uJipD1k)

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Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_twoscomp : \iota$ be given. Let $k2_twoscomp : \iota$ be given. Let $k3_gfacirc1 : \iota$ be given. Let $k2_msafree2 : \iota \Rightarrow \iota$ be given. Let $k17_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $r1_circcomb : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_msafree2 : \iota \Rightarrow \iota$ be given. Let $v1_circcomb : \iota \Rightarrow o$ be given. Let $v2_circcomb : \iota \Rightarrow o$ 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 $k5_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k6_margrel1 : \iota$ 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 $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v1_msualg_1 : \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_msualg_1 : \iota \Rightarrow \iota$ be given. Let $g1_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_msualg_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.k3_enumset1 \\ & X0\ X1\ X2\ X3\ X4 = k2_xboole_0\ (k1_enumset1\ X0\ X1\ X2)\ (k2_tarski\ X3\ X4) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.k2_enumset1\ X0\ X1 \\ & X2\ X3 = k2_enumset1\ X2\ X3\ X0\ X1 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.k2_enumset1\ X0\ X1 \\ & X2\ X3 = k2_enumset1\ X1\ X3\ X2\ X0 \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.k2_enumset1\ X0\ X1\ X2\ X3 = k2_xboole_0\ (k1_enumset1\ X0\ X1\ X2)\ (k1_tarski\ X3) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.k2_enumset1\ X0\ X1\ X2\ X3 = k2_enumset1\ X1\ X2\ X0\ X3 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(k4_xboole_0\ (k2_tarski\ X0\ X1)\ X2 = k2_tarski\ X0\ X1) \Leftrightarrow ((\neg X0 \in X2) \wedge (\neg X1 \in X2)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.k2_enumset1\ X0\ X1\ X2\ X3 = k2_xboole_0\ (k2_tarski\ X0\ X1)\ (k2_tarski\ X2\ X3) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0) \wedge (l1_msualg_1\ X0)) \Rightarrow (\forall X1. ((\neg v2_struct_0\ X1) \wedge (l1_msualg_1\ X1)) \Rightarrow ((r1_circcomb\ X0\ X1) \Rightarrow (k2_msafree2\ (k2_circcomb\ X0\ X1) = k2_xboole_0\ (k4_xboole_0\ (k2_msafree2\ X0)\ (k3_msafree2\ X1))\ (k4_xboole_0\ (k2_msafree2\ X1)\ (k3_msafree2\ X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k1_enumset1\ X0\ X1\ X2 = k1_enumset1\ X1\ X0\ X2 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(k4_xboole_0\ X0\ (k1_tarski\ X1) = X0) \Leftrightarrow (\neg X1 \in X0) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0) \wedge ((v1_circcomb\ X0) \wedge ((v2_circcomb\ X0) \wedge (l1_msualg_1\ X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge ((v1_circcomb\ X1) \wedge ((v2_circcomb\ X1) \wedge (l1_msualg_1\ X1)))) \Rightarrow (r1_circcomb\ X0\ X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X1) \wedge ((v1_funct_1\ X1) \wedge (v1_finseq_1\ X1))) \Rightarrow ((k2_msafree2\ (k5_circcomb\ X0\ X1) = k10_xtuple_0\ X1) \wedge (k3_msafree2\ (k5_circcomb\ X0\ X1) = k1_tarski\ (k4_tarski\ X1\ X0))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k2_msafree2 (k5_circcomb X0 (k10_finseq_1 X1 X2)) = k2_tarSKI X1 X2 \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k2_enumset1 X0 X0 X1 X2 = k1_enumset1 X0 X1 X2 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X0 \neq k4_tarSKI (k10_finseq_1 X0 X1) X2) \wedge (X1 \neq k4_tarSKI (k10_finseq_1 X0 X1) X2) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \neq X2) \wedge ((X1 \neq X2) \wedge (k6_subset_1 (k2_tarSKI X0 X1) (k1_tarSKI X2) \neq k2_tarSKI X0 X1)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarSKI X0 X1 = k2_xboole_0 (k1_tarSKI X0) (k1_tarSKI X1) \quad (17)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_msualg_1 X0)) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge (l1_msualg_1 X1)) \Rightarrow ((r1_circcomb X0 X1) \Rightarrow (k3_msafree2 (k2_circcomb X0 X1) = k2_xboole_0 (k3_msafree2 X0) (k3_msafree2 X1)) \wedge (r1_tarSKI (k2_msafree2 (k2_circcomb X0 X1)) (k2_xboole_0 (k2_msafree2 X0) (k2_msafree2 X1)))))) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.k3_enumset1 X0 X1 X2 X3 X4 = k2_xboole_0 (k2_enumset1 X0 X1 X2 X3) (k1_tarSKI X4) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (20)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_finseq_2 np_2 \\
& k6_margrel1) k6_margrel1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))))) \Rightarrow (\forall X1. \\
& ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k4_finseq_2 np_2 k6_margrel1) \\
& k6_margrel1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 \\
& np_2 k6_margrel1) k6_margrel1)))))) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 \\
& k6_margrel1) k6_margrel1)))))) \Rightarrow (\forall X3. \forall X4. \forall X5. \\
& \neg (X3 \neq k4_tarski (k10_finseq_1 X4 X5) X1) \wedge ((X4 \neq k4_tarski (k10_finseq_1 \\
& X5 X3) X2) \wedge ((X5 \neq k4_tarski (k10_finseq_1 X3 X4) X0) \wedge (\neg (\neg k4_tarski \\
& (k10_finseq_1 X3 X4) X0) \in k2_tarski X4 X5) \wedge ((\neg X5 \in k2_tarski (k4_tarski \\
& (k10_finseq_1 X3 X4) X0) (k4_tarski (k10_finseq_1 X4 X5) X1)) \wedge (\\
& (\neg X3 \in k2_tarski (k4_tarski (k10_finseq_1 X3 X4) X0) (k4_tarski \\
& (k10_finseq_1 X4 X5) X1)) \wedge (\neg k4_tarski (k10_finseq_1 X5 X3) X2) \in \\
& k1_enumset1 X3 X4 X5)))))))))
\end{aligned} \tag{21}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\
& X1))) \Rightarrow ((\neg v2_struct_0 (k5_circcomb X0 X1)) \wedge ((\neg v11_struct_0 (\\
& k5_circcomb X0 X1)) \wedge (v1_msualg_1 (k5_circcomb X0 X1))))
\end{aligned} \tag{22}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (v1_relat_1 (k10_finseq_1 X0 X1)) \wedge (v1_funct_1 \\
& (k10_finseq_1 X0 X1))
\end{aligned} \tag{23}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge \\
& (l1_msualg_1 X0))) \wedge ((\neg v2_struct_0 X1) \wedge (l1_msualg_1 X1))) \Rightarrow (\\
& (\neg v2_struct_0 (k2_circcomb X1 X0)) \wedge ((\neg v11_struct_0 (k2_circcomb \\
& X1 X0)) \wedge (v1_msualg_1 (k2_circcomb X1 X0))))
\end{aligned} \tag{24}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_circcomb X0) \wedge \\
& (l1_msualg_1 X0))) \wedge ((\neg v2_struct_0 X1) \wedge ((v2_circcomb X1) \wedge (l1_msualg_1 \\
& X1)))) \Rightarrow ((\neg v2_struct_0 (k2_circcomb X0 X1)) \wedge ((v1_msualg_1 (k2_circcomb \\
& X0 X1)) \wedge (v2_circcomb (k2_circcomb X0 X1))))
\end{aligned} \tag{25}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v1_circcomb X0) \wedge \\
& (l1_msualg_1 X0))) \wedge ((\neg v2_struct_0 X1) \wedge ((v1_circcomb X1) \wedge (l1_msualg_1 \\
& X1)))) \Rightarrow ((\neg v2_struct_0 (k2_circcomb X0 X1)) \wedge ((v1_msualg_1 (k2_circcomb \\
& X0 X1)) \wedge (v1_circcomb (k2_circcomb X0 X1))))
\end{aligned} \tag{26}$$

Assume the following.

$$\forall X0.\forall X1.v1_finseq_1 (k10_finseq_1 X0 X1) \quad (27)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\ X1)))\Rightarrow((\neg v11_struct_0 (k5_circcomb X0 X1))\wedge((v1_msualg_1 (k5_circcomb \\ X0 X1))\wedge((v1_circcomb (k5_circcomb X0 X1))\wedge(v2_circcomb (k5_circcomb \\ X0 X1)))))) \end{aligned} \quad (28)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\ X1)))\Rightarrow((\neg v11_struct_0 (k5_circcomb X0 X1))\wedge((v1_msualg_1 (k5_circcomb \\ X0 X1))\wedge(l1_msualg_1 (k5_circcomb X0 X1)))) \end{aligned} \quad (29)$$

Assume the following.

$$\begin{aligned} (v1_funct_1 k3_twoscomp)\wedge((v1_funct_2 k3_twoscomp (k4_finseq_2 \\ np_2 k6_margrel1) k6_margrel1)\wedge(m1_subset_1 k3_twoscomp (k1_zfmisc_1 \\ (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))) \end{aligned} \quad (30)$$

Assume the following.

$$\begin{aligned} (v1_funct_1 k3_gfacirc1)\wedge((v1_funct_2 k3_gfacirc1 (k4_finseq_2 \\ np_2 k6_margrel1) k6_margrel1)\wedge(m1_subset_1 k3_gfacirc1 (k1_zfmisc_1 \\ (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))) \end{aligned} \quad (31)$$

Assume the following.

$$\begin{aligned} (v1_funct_1 k2_twoscomp)\wedge((v1_funct_2 k2_twoscomp (k4_finseq_2 \\ np_2 k6_margrel1) k6_margrel1)\wedge(m1_subset_1 k2_twoscomp (k1_zfmisc_1 \\ (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))) \end{aligned} \quad (32)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_msualg_1 X0))\wedge \\ ((\neg v2_struct_0 X1)\wedge(l1_msualg_1 X1)))\Rightarrow((\neg v2_struct_0 (k2_circcomb \\ X0 X1))\wedge((v1_msualg_1 (k2_circcomb X0 X1))\wedge(l1_msualg_1 (k2_circcomb \\ X0 X1)))) \end{aligned} \quad (33)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (34)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_msualg_1 X0))\Rightarrow(k3_msafree2 X0 = k2_relset_1 (u1_struct_0 X0) (u2_msualg_1 X0)) \quad (35)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_msualg_1 X0)) \Rightarrow (k2_msafree2 X0 = k6_subset_1 (u1_struct_0 X0) (k2_relset_1 (u1_struct_0 X0) (u2_msualg_1 X0))) \quad (36)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k17_gfacirc1 X0 X1 X2 = k2_circcomb (k2_circcomb (k5_circcomb k3_gfacirc1 (k10_finseq_1 X0 X1)) (k5_circcomb k3_twoscomp (k10_finseq_1 X1 X2))) (k5_circcomb k2_twoscomp (k10_finseq_1 X2 X0)) \quad (37)$$

Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (38)$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski X0 X1 = k2_tarski X1 X0 \quad (39)$$

Assume the following.

$$\forall X0. (l1_msualg_1 X0) \Rightarrow ((v1_msualg_1 X0) \Rightarrow (X0 = g1_msualg_1 (u1_struct_0 X0) (u4_struct_0 X0) (u1_msualg_1 X0) (u2_msualg_1 X0))) \quad (40)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. \neg (X0 \neq k4_tarski (k10_finseq_1 X1 X2) k3_twoscomp) \wedge ((X1 \neq k4_tarski (k10_finseq_1 X2 X0) k2_twoscomp) \wedge ((X2 \neq k4_tarski (k10_finseq_1 X0 X1) k3_gfacirc1) \wedge (k2_msafree2 (k17_gfacirc1 X0 X1 X2) \neq k1_enumset1 X0 X1 X2)))$$