

t14_gfacirc1
(TMEwL3YWjiv5Hgy1HUKGmksiBBZXaYnomP1)

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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 $k2_twoscomp : \iota$ be given. Let $k2_msafree2 : \iota \Rightarrow \iota$ be given. Let $k7_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_3 : \iota$ 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 $k25_twoscomp : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_msualg_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_msualg_1 X1)) \Rightarrow ((r1_circcomb X0 X1) \Rightarrow (\\ & k2_msafree2 (k2_circcomb X0 X1) = k2_xboole_0 (k4_xboole_0 (k2_msafree2 \\ & X0) (k3_msafree2 X1)) (k4_xboole_0 (k2_msafree2 X1) (k3_msafree2 \\ & X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_circcomb X0) \wedge ((v2_circcomb \\ & X0) \wedge (l1_msualg_1 X0)))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v1_circcomb \\ & X1) \wedge ((v2_circcomb X1) \wedge (l1_msualg_1 X1)))) \Rightarrow (r1_circcomb X0 X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1)))\Rightarrow((k2_msafree2 (k5_circcomb X0 X1) = k10_xtuple_0 X1)\wedge(k3_msafree2 (k5_circcomb X0 X1) = k1_tarski (k4_tarski X1 X0))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(k4_xboole_0 X0 X1 = k1_xboole_0)\Leftrightarrow(r1_tarski X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.k2_xboole_0 X0 k1_xboole_0 = X0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0\neq k4_tarski (k10_finseq_1 X1 X2) k2_twoscomp)\wedge((X1\neq k4_tarski (k10_finseq_1 X2 X0) k2_twoscomp)\wedge((X2\neq k4_tarski (k10_finseq_1 X0 X1) k2_twoscomp)\wedge(k2_msafree2 (k5_gfacirc1 X0 X1 X2)\neq k1_enumset1 X0 X1 X2))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k10_xtuple_0 (k11_finseq_1 X0 X1 X2) = k1_enumset1 X0 X1 X2 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k3_msafree2 (k5_gfacirc1 X0 X1 X2) = k1_enumset1 (k4_tarski (k10_finseq_1 X0 X1) k2_twoscomp) (k4_tarski (k10_finseq_1 X1 X2) k2_twoscomp) (k4_tarski (k10_finseq_1 X2 X0) k2_twoscomp) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (10)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_finseq_2 np_2 \\
& k6_margrel1) k6_margrel1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))))) \Rightarrow (\forall X1. \\
& ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k4_finseq_2 np_2 k6_margrel1) \\
& k6_margrel1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 \\
& np_2 k6_margrel1) k6_margrel1)))))) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 \\
& k6_margrel1) k6_margrel1)))))) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge \\
& ((v1_funct_2 X3 (k4_finseq_2 np_3 k6_margrel1) k6_margrel1) \wedge \\
& (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_3 \\
& k6_margrel1) k6_margrel1)))))) \Rightarrow (\forall X4. \forall X5. \forall X6. \\
& k6_subset_1 (k1_enumset1 X4 X5 X6) (k1_tarski (k4_tarski (k11_finseq_1 \\
& (k4_tarski (k10_finseq_1 X4 X5) X0) (k4_tarski (k10_finseq_1 X5 \\
& X6) X1) (k4_tarski (k10_finseq_1 X6 X4) X2)) X3)) = k1_enumset1 X4 \\
& X5 X6)))
\end{aligned} \tag{11}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 (k11_finseq_1 X0 X1 X2)) \wedge (v1_funct_1 (k11_finseq_1 X0 X1 X2)) \tag{12}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((\neg v2_struct_0 (k5_circcomb X0 X1)) \wedge ((\neg v11_struct_0 (k5_circcomb X0 X1)) \wedge (v1_msualg_1 (k5_circcomb X0 X1)))) \tag{13}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. v1_finseq_1 (k11_finseq_1 X0 X1 X2) \tag{14}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((\neg v11_struct_0 (k5_circcomb X0 X1)) \wedge ((v1_msualg_1 (k5_circcomb X0 X1)) \wedge ((v1_circcomb (k5_circcomb X0 X1)) \wedge (v2_circcomb (k5_circcomb X0 X1))))) \tag{15}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (\neg v2_struct_0 (k5_gfacirc1 X0 X1 X2)) \wedge ((\neg v11_struct_0 (k5_gfacirc1 X0 X1 X2)) \wedge ((v1_msualg_1 (k5_gfacirc1 X0 X1 X2)) \wedge ((v1_circcomb (k5_gfacirc1 X0 X1 X2)) \wedge ((v2_circcomb (k5_gfacirc1 X0 X1 X2)) \wedge ((v3_circcomb (k5_gfacirc1 X0 X1 X2)) \wedge (l1_msualg_1 (k5_gfacirc1 X0 X1 X2))))))) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1)))\Rightarrow((\neg v11_struct_0 (k5_circcomb X0 X1))\wedge((v1_msualg_1 (k5_circcomb X0 X1))\wedge(l1_msualg_1 (k5_circcomb X0 X1)))) \quad (17)$$

Assume the following.

$$(v1_funct_1 k2_twoscomp)\wedge((v1_funct_2 k2_twoscomp (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)\wedge(m1_subset_1 k2_twoscomp (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))) \quad (18)$$

Assume the following.

$$(v1_funct_1 k25_twoscomp)\wedge((v1_funct_2 k25_twoscomp (k4_finseq_2 np_3 k6_margrel1) k6_margrel1)\wedge(m1_subset_1 k25_twoscomp (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_3 k6_margrel1) k6_margrel1)))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k7_gfacirc1 X0 X1 X2 = k2_circcomb (k5_gfacirc1 X0 X1 X2) (k5_circcomb k25_twoscomp (k11_finseq_1 (k4_tarski (k10_finseq_1 X0 X1) k2_twoscomp) (k4_tarski (k10_finseq_1 X1 X2) k2_twoscomp) (k4_tarski (k10_finseq_1 X2 X0) k2_twoscomp))) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k5_gfacirc1 X0 X1 X2 = k2_circcomb (k2_circcomb (k5_circcomb k2_twoscomp (k10_finseq_1 X0 X1)) (k5_circcomb k2_twoscomp (k10_finseq_1 X1 X2))) (k5_circcomb k2_twoscomp (k10_finseq_1 X2 X0)) \quad (22)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\neg(X0\neq k4_tarski (k10_finseq_1 X1 X2) k2_twoscomp)\wedge((X1\neq k4_tarski (k10_finseq_1 X2 X0) k2_twoscomp)\wedge((X2\neq k4_tarski (k10_finseq_1 X0 X1) k2_twoscomp)\wedge(k2_msafree2 (k7_gfacirc1 X0 X1 X2)\neq k1_enumset1 X0 X1 X2)))$$