

t36_gfacirc1
(TMURL1r1p27YKZeBF2dih5iVt7gsCzLUQx7)

October 27, 2020

Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k13_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_twoscomp : \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25_twoscomp : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $k8_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $k2_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v1_msualg_1 : \iota \Rightarrow o$ be given. Let $v1_circcomb : \iota \Rightarrow o$ be given. Let $v2_circcomb : \iota \Rightarrow o$ be given. Let $v3_circcomb : \iota \Rightarrow o$ be given. Let $k10_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1) \wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 \\ & k6_margrel1) k6_margrel1)))) \Rightarrow ((k4_tarski (k10_finseq_1 X0 \\ & X1) X3 \in u1_struct_0 (k8_facirc_1 X0 X1 X2 X3)) \wedge (k4_tarski (k10_finseq_1 \\ & (k4_tarski (k10_finseq_1 X0 X1) X3) X2) X3 \in u1_struct_0 (k8_facirc_1 \\ & X0 X1 X2 X3))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_msualg_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_msualg_1 X1)) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((X2 \in u1_struct_0 (k2_circcomb X0 X1)) \wedge \\ & X2 \in u1_struct_0 (k2_circcomb X1 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(X0 \in u1_struct_0 (k7_gfacirc1 \\ & X0 X1 X2)) \wedge ((X1 \in u1_struct_0 (k7_gfacirc1 X0 X1 X2)) \wedge ((X2 \in u1_struct_0 \\ & (k7_gfacirc1 X0 X1 X2)) \wedge ((k4_tarski (k10_finseq_1 X0 X1) k2_twoscomp \in \\ & u1_struct_0 (k7_gfacirc1 X0 X1 X2)) \wedge ((k4_tarski (k10_finseq_1 \\ & X1 X2) k2_twoscomp \in u1_struct_0 (k7_gfacirc1 X0 X1 X2)) \wedge ((k4_tarski \\ & (k10_finseq_1 X2 X0) k2_twoscomp \in u1_struct_0 (k7_gfacirc1 X0 \\ & X1 X2)) \wedge (k4_tarski (k11_finseq_1 (k4_tarski (k10_finseq_1 X0 \\ & X1) k2_twoscomp) (k4_tarski (k10_finseq_1 X1 X2) k2_twoscomp) \\ & (k4_tarski (k10_finseq_1 X2 X0) k2_twoscomp)) k25_twoscomp \in u1_struct_0 \\ & (k7_gfacirc1 X0 X1 X2))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(\neg v2_struct_0 (k7_gfacirc1 \\ & X0 X1 X2)) \wedge ((\neg v11_struct_0 (k7_gfacirc1 X0 X1 X2)) \wedge ((v1_msualg_1 \\ & (k7_gfacirc1 X0 X1 X2)) \wedge ((v1_circcomb (k7_gfacirc1 X0 X1 X2)) \wedge \\ & ((v2_circcomb (k7_gfacirc1 X0 X1 X2)) \wedge ((v3_circcomb (k7_gfacirc1 \\ & X0 X1 X2)) \wedge (l1_msualg_1 (k7_gfacirc1 X0 X1 X2))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k14_twoscomp) \wedge ((v1_funct_2 k14_twoscomp (k4_finseq_2 \\ & np_2 k6_margrel1) k6_margrel1) \wedge (m1_subset_1 k14_twoscomp (\\ & k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(\neg v2_struct_0 (k10_gfacirc1 \\ & X0 X1 X2)) \wedge ((\neg v11_struct_0 (k10_gfacirc1 X0 X1 X2)) \wedge ((v1_msualg_1 \\ & (k10_gfacirc1 X0 X1 X2)) \wedge ((v1_circcomb (k10_gfacirc1 X0 X1 X2)) \wedge \\ & ((v2_circcomb (k10_gfacirc1 X0 X1 X2)) \wedge ((v3_circcomb (k10_gfacirc1 \\ & X0 X1 X2)) \wedge (l1_msualg_1 (k10_gfacirc1 X0 X1 X2))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k13_gfacirc1 X0 X1 X2 = k2_circcomb (k10_gfacirc1 X0 X1 X2) (k7_gfacirc1 X0 X1 X2) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k10_gfacirc1 X0 X1 X2 = k8_facirc_1 X0 X1 X2 k14_twoscomp \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(X0 \in u1_struct_0 (k13_gfacirc1 \\ & X0 X1 X2)) \wedge ((X1 \in u1_struct_0 (k13_gfacirc1 X0 X1 X2)) \wedge ((X2 \in u1_struct_0 \\ & (k13_gfacirc1 X0 X1 X2)) \wedge ((k4_tarski (k10_finseq_1 X0 X1) k14_twoscomp \in \\ & u1_struct_0 (k13_gfacirc1 X0 X1 X2)) \wedge ((k4_tarski (k10_finseq_1 \\ & (k4_tarski (k10_finseq_1 X0 X1) k14_twoscomp) X2) k14_twoscomp \in \\ & u1_struct_0 (k13_gfacirc1 X0 X1 X2)) \wedge ((k4_tarski (k10_finseq_1 \\ & X0 X1) k2_twoscomp \in u1_struct_0 (k13_gfacirc1 X0 X1 X2)) \wedge ((k4_tarski \\ & (k10_finseq_1 X1 X2) k2_twoscomp \in u1_struct_0 (k13_gfacirc1 X0 \\ & X1 X2)) \wedge ((k4_tarski (k10_finseq_1 X2 X0) k2_twoscomp \in u1_struct_0 \\ & (k13_gfacirc1 X0 X1 X2)) \wedge (k4_tarski (k11_finseq_1 (k4_tarski \\ & (k10_finseq_1 X0 X1) k2_twoscomp) (k4_tarski (k10_finseq_1 X1 \\ & X2) k2_twoscomp) (k4_tarski (k10_finseq_1 X2 X0) k2_twoscomp)) \\ & k25_twoscomp \in u1_struct_0 (k13_gfacirc1 X0 X1 X2)))))))))) \end{aligned}$$