

t85_facirc_1

(TMXLz7wf5XRR8dxdZ5jmBqxcvvSQAfzNL7M)

October 27, 2020

Let $v1_xtuple_0 : \iota \Rightarrow o$ be given. Let $k2_msafree2 : \iota \Rightarrow \iota$ be given. Let $k19_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_circcomb : \iota \Rightarrow o$ be given. Let $v2_circcomb : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k3_msafree2 : \iota \Rightarrow \iota$ be given. Let $v1_facirc_1 : \iota \Rightarrow o$ be given. Let $k2_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_facirc_1 : \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k17_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v1_msualg_1 : \iota \Rightarrow o$ be given. Let $v3_circcomb : \iota \Rightarrow o$ be given. Let $k1_facirc_1 : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_circcomb X0) \wedge ((v2_circcomb \\ & X0) \wedge (l1_msualg_1 X0)))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v1_circcomb \\ & X1) \wedge ((v2_circcomb X1) \wedge (l1_msualg_1 X1)))) \Rightarrow (((v1_relat_1 (k3_msafree2 \\ & X0)) \wedge (v1_relat_1 (k3_msafree2 X1))) \Rightarrow ((v1_facirc_1 (k2_msafree2 \\ & X0)) \vee ((v1_facirc_1 (k2_msafree2 X1)) \vee (k2_msafree2 (k2_circcomb \\ & X0 X1) = k2_xboole_0 (k2_msafree2 X0) (k2_msafree2 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xtuple_0 X0) \Rightarrow (\forall X1. (\neg v1_xtuple_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1_xtuple_0 X2) \Rightarrow ((k2_msafree2 (k15_facirc_1 X0 \\ & X1 X2) = k1_enumset1 X0 X1 X2) \wedge (k3_msafree2 (k15_facirc_1 X0 X1 X2) = \\ & k2_xboole_0 (k1_enumset1 (k4_tarski (k10_finseq_1 X0 X1) k3_facirc_1) \\ & (k4_tarski (k10_finseq_1 X1 X2) k3_facirc_1) (k4_tarski (k10_finseq_1 \\ & X2 X0) k3_facirc_1)) (k1_tarski (k17_facirc_1 X0 X1 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.v1_relat_1 (k3_msafree2 (k15_facirc_1 X0 X1 X2)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X3)\wedge \\ & ((v1_funct_2 X3 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)\wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 \\ & k6_margrel1) k6_margrel1))))))\Rightarrow(v1_relat_1 (k3_msafree2 (k8_facirc_1 \\ & X0 X1 X2 X3))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X3)\wedge \\ & ((v1_funct_2 X3 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)\wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 \\ & k6_margrel1) k6_margrel1))))))\Rightarrow((X0\neq k4_tarski (k10_finseq_1 \\ & X1 X2) X3)\Rightarrow(k2_msafree2 (k8_facirc_1 X1 X2 X0 X3) = k1_enumset1 X1 \\ & X2 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X0 = X0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xtuple_0 X0)\wedge((\neg v1_xtuple_0 X1)\wedge(\neg v1_xtuple_0 X2)))\Rightarrow(\neg v1_facirc_1 (k1_enumset1 X0 X1 X2)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1_xtuple_0 (k4_tarski X0 X1) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X3)\wedge \\ & ((v1_funct_2 X3 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)\wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 \\ & k6_margrel1) k6_margrel1))))))\Rightarrow((\neg v2_struct_0 (k8_facirc_1 \\ & X0 X1 X2 X3))\wedge((\neg v11_struct_0 (k8_facirc_1 X0 X1 X2 X3))\wedge((v1_msualg_1 \\ & (k8_facirc_1 X0 X1 X2 X3))\wedge((v1_circcomb (k8_facirc_1 X0 X1 X2 X3))\wedge \\ & ((v2_circcomb (k8_facirc_1 X0 X1 X2 X3))\wedge((v3_circcomb (k8_facirc_1 \\ & X0 X1 X2 X3))\wedge(l1_msualg_1 (k8_facirc_1 X0 X1 X2 X3))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k1_facirc_1)\wedge((v1_funct_2 k1_facirc_1 (k4_finseq_2 \\ & np_2 k6_margrel1) k6_margrel1)\wedge(m1_subset_1 k1_facirc_1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(\neg v2_struct_0 (k15_facirc_1 \\ & X0 X1 X2))\wedge((\neg v11_struct_0 (k15_facirc_1 X0 X1 X2))\wedge((v1_msualg_1 \\ & (k15_facirc_1 X0 X1 X2))\wedge((v1_circcomb (k15_facirc_1 X0 X1 X2))\wedge \\ & ((v2_circcomb (k15_facirc_1 X0 X1 X2))\wedge((v3_circcomb (k15_facirc_1 \\ & X0 X1 X2))\wedge(l1_msualg_1 (k15_facirc_1 X0 X1 X2))))))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k19_facirc_1 X0 X1 X2 = k2_circcomb (k8_facirc_1 X0 X1 X2 k1_facirc_1) (k15_facirc_1 X0 X1 X2) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_tarski X1 X0 \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xtuple_0 X0)\Rightarrow(\forall X1.(\neg v1_xtuple_0 X1)\Rightarrow \\ & (\forall X2.(\neg v1_xtuple_0 X2)\Rightarrow(k2_msafree2 (k19_facirc_1 X0 \\ & X1 X2) = k1_enumset1 X0 X1 X2))) \end{aligned}$$