

t72_facirc_1
(TMP7SNCPX8CnsJtBRBUDDnB6bCgtc6UHzwp)

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Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v1_msualg_1 : \iota \Rightarrow o$ be given. Let $k14_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_facirc_1 : \iota$ be given. Let $k3_facirc_1 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X0 \in u1_struct_0 (k5_circcomb \\ & X2 (k10_finseq_1 X0 X1))) \wedge ((X1 \in u1_struct_0 (k5_circcomb X2 (k10_finseq_1 \\ & X0 X1))) \wedge (k4_tarski (k10_finseq_1 X0 X1) X2 \in u1_struct_0 (k5_circcomb \\ & X2 (k10_finseq_1 X0 X1)))) \end{aligned} \tag{1}$$

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.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 (k11_finseq_1 X0 X1 X2)) \wedge (v1_funct_1 (k11_finseq_1 X0 X1 X2)) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\ & X1))) \Rightarrow ((\neg v2_struct_0 (k5_circcomb X0 X1)) \wedge ((\neg v11_struct_0 (\\ & k5_circcomb X0 X1)) \wedge (v1_msualg_1 (k5_circcomb X0 X1)))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k10_finseq_1 X0 X1))\wedge(v1_funct_1 (k10_finseq_1 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.v1_finseq_1 (k11_finseq_1 X0 X1 X2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1_finseq_1 (k10_finseq_1 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1)))\Rightarrow((\neg v11_struct_0 (k5_circcomb X0 X1))\wedge((v1_msualg_1 (k5_circcomb X0 X1))\wedge(l1_msualg_1 (k5_circcomb X0 X1)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_msualg_1 X0))\wedge((\neg v2_struct_0 X1)\wedge(l1_msualg_1 X1)))\Rightarrow((\neg v2_struct_0 (k2_circcomb X0 X1))\wedge((v1_msualg_1 (k2_circcomb X0 X1))\wedge(l1_msualg_1 (k2_circcomb X0 X1)))))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(\neg v2_struct_0 (k14_facirc_1 X0 X1 X2))\wedge((\neg v11_struct_0 (k14_facirc_1 X0 X1 X2))\wedge((v1_msualg_1 (k14_facirc_1 X0 X1 X2))\wedge((v1_circcomb (k14_facirc_1 X0 X1 X2))\wedge((v2_circcomb (k14_facirc_1 X0 X1 X2))\wedge((v3_circcomb (k14_facirc_1 X0 X1 X2))\wedge(l1_msualg_1 (k14_facirc_1 X0 X1 X2)))))))))) \quad (11)$$

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.

$$\forall X0.\forall X1.\forall X2.k15_facirc_1 X0 X1 X2 = k2_circcomb (k14_facirc_1 X0 X1 X2) (k5_circcomb k4_facirc_1 (k11_finseq_1 (k4_tarski (k10_finseq_1 X0 X1) k3_facirc_1) (k4_tarski (k10_finseq_1 X1 X2) k3_facirc_1) (k4_tarski (k10_finseq_1 X2 X0) k3_facirc_1))) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.k14_facirc_1 X0 X1 X2 = k2_circcomb \\ & (k2_circcomb (k5_circcomb k3_facirc_1 (k10_finseq_1 X0 X1)) (\\ & k5_circcomb k3_facirc_1 (k10_finseq_1 X1 X2))) (k5_circcomb k3_facirc_1 \\ & (k10_finseq_1 X2 X0)) \end{aligned} \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.k2_tarSKI X0 X1 = k2_tarSKI X1 X0 \tag{15}$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(X0 \in u1_struct_0 (k15_facirc_1 \\ & X0 X1 X2)) \wedge ((X1 \in u1_struct_0 (k15_facirc_1 X0 X1 X2)) \wedge (X2 \in u1_struct_0 \\ & (k15_facirc_1 X0 X1 X2))) \end{aligned}$$