

t4_facirc_2

(TMQ7C7SShQv9dQ5KfkYHKpxfpA8qzUFXukx)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_facirc_2 : \iota \Rightarrow \iota$ be given. Let $g1_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_msualg_1 : \iota \Rightarrow \iota$ be given. Let $u2_msualg_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v1_msualg_1 : \iota \Rightarrow o$ be given. Let $l5_struct_0 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski (k1_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (2)$$

Assume the following.

$$\forall X0.k2_xboole_0 X0 k1_xboole_0 = X0 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Rightarrow (k2_xboole_0 X0 X1 = X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \wedge ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_xboole_0 X1)))) \Rightarrow (k1_funct_4 X1 X0 = X0) \quad (5)$$

Assume the following.

$$\exists X0.(l1_msualg_1 X0) \wedge ((\neg v2_struct_0 X0) \wedge ((v11_struct_0 X0) \wedge (v1_msualg_1 X0))) \quad (6)$$

Assume the following.

$$\forall X0.(\neg v2_struct_0 (k1_facirc_2 X0)) \wedge ((v11_struct_0 (k1_facirc_2 X0)) \wedge (v1_msualg_1 (k1_facirc_2 X0))) \quad (7)$$

Assume the following.

$$\forall X0.((v11_struct_0 X0) \wedge (l5_struct_0 X0)) \Rightarrow (v1_xboole_0 (u4_struct_0 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_msualg_1 X0) \Rightarrow & ((v1_funct_1 (u2_msualg_1 X0)) \wedge \\ & ((v1_funct_2 (u2_msualg_1 X0) (u4_struct_0 X0) (u1_struct_0 X0)) \wedge \\ & (m1_subset_1 (u2_msualg_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u4_struct_0 \\ & X0) (u1_struct_0 X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_msualg_1 X0) \Rightarrow & ((v1_funct_1 (u1_msualg_1 X0)) \wedge \\ & ((v1_funct_2 (u1_msualg_1 X0) (u4_struct_0 X0) (k3_finseq_2 (\\ & u1_struct_0 X0))) \wedge (m1_subset_1 (u1_msualg_1 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u4_struct_0 X0) (k3_finseq_2 (u1_struct_0 X0)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(l1_msualg_1 X0) \Rightarrow (l5_struct_0 X0) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v2_struct_0 X0) \wedge (l1_msualg_1 X0)) \wedge \\ ((\neg v2_struct_0 X1) \wedge (l1_msualg_1 X1)) \Rightarrow & ((\neg v2_struct_0 (k2_circcomb \\ X0 X1)) \wedge ((v1_msualg_1 (k2_circcomb X0 X1)) \wedge (l1_msualg_1 (k2_circcomb \\ X0 X1)))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(v11_struct_0 (k1_facirc_2 X0)) \wedge ((v1_msualg_1 (k1_facirc_2 X0)) \wedge (l1_msualg_1 (k1_facirc_2 X0))) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_msualg_1 X0)) \Rightarrow & (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_msualg_1 X1)) \Rightarrow (\forall X2.((\neg v2_struct_0 \\ X2) \wedge ((v1_msualg_1 X2) \wedge (l1_msualg_1 X2))) \Rightarrow & ((X2 = k2_circcomb \\ X0 X1) \Leftrightarrow ((u1_struct_0 X2 = k2_xboole_0 (u1_struct_0 X0) (u1_struct_0 \\ X1)) \wedge ((u4_struct_0 X2 = k2_xboole_0 (u4_struct_0 X0) (u4_struct_0 \\ X1)) \wedge ((u1_msualg_1 X2 = k1_funct_4 (u1_msualg_1 X0) (u1_msualg_1 \\ X1)) \wedge (u2_msualg_1 X2 = k1_funct_4 (u2_msualg_1 X0) (u2_msualg_1 \\ X1)))))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v11_struct_0 X1)\wedge((v1_msualg_1 X1)\wedge(l1_msualg_1 X1)))\Rightarrow((X1 = k1_facirc_2 X0)\Leftrightarrow(u1_struct_0 X1 = k1_tarSKI X0)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_xboole_0 X2)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_relat_1 X0) \quad (19)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_funct_1 X0) \quad (20)$$

Assume the following.

$$\forall X0.(l1_msualg_1 X0)\Rightarrow((v1_msualg_1 X0)\Rightarrow(X0 = g1_msualg_1 (u1_struct_0 X0) (u4_struct_0 X0) (u1_msualg_1 X0) (u2_msualg_1 X0))) \quad (21)$$

Theorem 1

$$\forall X0.\forall X1.((\neg v2_struct_0 X1)\wedge(l1_msualg_1 X1))\Rightarrow((X0 \in u1_struct_0 X1)\Rightarrow(k2_circcomb (k1_facirc_2 X0) X1 = g1_msualg_1 (u1_struct_0 X1) (u4_struct_0 X1) (u1_msualg_1 X1) (u2_msualg_1 X1)))$$