

t7_facirc_1

(TMNE38r1ZKVJewfc17WTewmwSfxj7xFCmxg)

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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 $k2_msafree2 : \iota \Rightarrow \iota$ be given. Let $k2_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (r1_xboole_0 X0 X1) \Leftrightarrow (k4_xboole_0 X0 X1 = X0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_circcomb X0) \wedge ((v2_circcomb \\ X0) \wedge (l1_msualg_1 X0)))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v1_circcomb \\ X1) \wedge ((v2_circcomb X1) \wedge (l1_msualg_1 X1)))) \Rightarrow ((v1_relat_1 (k3_msafree2 \\ X1)) \Rightarrow ((v1_facirc_1 (k2_msafree2 X0)) \vee ((r1_tarski (k2_msafree2 \\ X0) (k2_msafree2 (k2_circcomb X0 X1))) \wedge (k2_msafree2 (k2_circcomb \\ X0 X1) = k2_xboole_0 (k2_msafree2 X0) (k7_subset_1 (u1_struct_0 \\ X1) (k2_msafree2 X1) (k3_msafree2 X0))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow ((v1_facirc_1 X0) \vee (r1_xboole_0 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k7_subset_1 X0 X1 X2 = k4_xboole_0 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_msualg_1 X0)) \Rightarrow (m1_subset_1 (k2_msafree2 X0) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (5)$$

Theorem 1

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