t57_gfacirc1 (TMS-dXnu9Ui1iRHeCETNXZHAw1ViRhY4HEoZ)

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Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_gfacirc1 : \iota$ be given. Let $k3\_msafree2 : \iota \Rightarrow \iota$ be given. Let $k22\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.k3\_msafree2\ (k22\_gfacirc1\ X0\ X1\ X2) = k2\_xboole\_0\ (k1\_tarski\ (k4\_tarski\ (k10\_finseq\_1\ X0\ X1)\ k4\_gfacirc1))\ (k1\_tarski\ (k24\_gfacirc1\ X0\ X1\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarski\ X0\ X1 = k2\_xboole\_0\ (k1\_tarski\ X0)\ (k1\_tarski\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_tarski\ X0\ X1) \Leftrightarrow (\forall X3.\ (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarski\ X0\ X1 = k2\_tarski\ X1\ X0 \tag{4}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(k4\_tarski\ (k10\_finseq\_1\ X0\ X1)\ k4\_gfacirc1 \in k3\_msafree2\ (k22\_gfacirc1\ X0\ X1\ X2)) \wedge (k24\_gfacirc1\ X0\ X1\ X2 \in k3\_msafree2\ (k22\_gfacirc1\ X0\ X1\ X2))$$