t112_gfacirc1 (TMGuQ1won2qBQFi2vN1epJ44CqNGEQfhz1r)

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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 $k4\_twoscomp : \iota$ be given. Let $k3\_msafree2 : \iota \Rightarrow \iota$ be given. Let $k43\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k45\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.k2\_enumset1\ X0\ X1\ X2\ X3 = k2\_xboole\_0\ (k1\_enumset1\ X0\ X1\ X2)\ (k1\_tarski\ X3) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k3\_msafree2\ (k43\_gfacirc1\ X0\ X1\ X2) = k2\_xboole\_0\ (k1\_enumset1\ (k4\_tarski\ (k10\_finseq\_1\ X0\ X1)\ k4\_twoscomp)\ (k4\_tarski\ (k10\_finseq\_1\ X1\ X2)\ k4\_twoscomp)\ (k4\_tarski\ (k10\_finseq\_1\ X2\ X0)\ k4\_twoscomp))\ (k1\_tarski\ (k45\_gfacirc1\ X0\ X1\ X2)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(X4 = k2\_enumset1\ X0\ X1\ X2\ X3) \Leftrightarrow (\forall X5.(X5 \in X4) \Leftrightarrow (\neg(X5 \neq X0) \wedge ((X5 \neq X1) \wedge ((X5 \neq X2) \wedge (X5 \neq X3))))) \tag{3}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(k4\_tarski\ (k10\_finseq\_1\ X0\ X1)\ k4\_twoscomp \in k3\_msafree2\ (k43\_gfacirc1\ X0\ X1\ X2)) \wedge ((k4\_tarski\ (k10\_finseq\_1\ X1\ X2)\ k4\_twoscomp \in k3\_msafree2\ (k43\_gfacirc1\ X0\ X1\ X2)) \wedge ((k4\_tarski\ (k10\_finseq\_1\ X2\ X0)\ k4\_twoscomp \in k3\_msafree2\ (k43\_gfacirc1\ X0\ X1\ X2)) \wedge (k45\_gfacirc1\ X0\ X1\ X2 \in k3\_msafree2\ (k43\_gfacirc1\ X0\ X1\ X2))))$$