t18_gfacirc2 (TMNijynAdxpibL52RFQD2RGt8yzSkgLU3rq)

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Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k1\_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_margrel1 : \iota$ be given. Let $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k8\_margrel1 : \iota$ be given. Let $k5\_gfacirc2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k9\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_gfacirc2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_circcomb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_circcomb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_gfacirc2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_finseq\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow ((X1 = k9\_finseq\_1\ X0) \Leftrightarrow ((k3\_finseq\_1\ X1 = np\_\_1) \wedge (k1\_funct\_1\ X1\ np\_\_1 = X0))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow(\forall X2.(X2 = k4\_tarski\ k1\_xboole\_0\ (k1\_margrel1\ k6\_margrel1\ (k4\_finseq\_2\ k6\_numbers\ k6\_margrel1)\ k8\_margrel1))\Rightarrow((k5\_gfacirc2\ np\_\_1\ X0\ X1 = k2\_circcomb\ (k5\_circcomb\ (k1\_margrel1\ k6\_margrel1\ (k4\_finseq\_2\ k6\_numbers\ k6\_margrel1)\ k8\_margrel1)\ k1\_xboole\_0)\ (k25\_gfacirc1\ (k1\_funct\_1\ X0\ np\_\_1)\ (k1\_funct\_1\ X1\ np\_\_1)\ X2))\wedge((k6\_gfacirc2\ np\_\_1\ X0\ X1 = k3\_circcomb\ (k5\_circcomb\ (k1\_margrel1\ k6\_margrel1\ (k4\_finseq\_2\ k6\_numbers\ k6\_margrel1)\ k8\_margrel1)\ k1\_xboole\_0)\ (k25\_gfacirc1\ (k1\_funct\_1\ X0\ np\_\_1)\ (k1\_funct\_1\ X1\ np\_\_1)\ X2)\ (k7\_circcomb\ k1\_xboole\_0\ k6\_margrel1\ (k1\_margrel1\ k6\_margrel1\ (k4\_finseq\_2\ k6\_numbers\ k6\_margrel1)\ k8\_margrel1)\ k1\_xboole\_0)\ (k26\_gfacirc1\ (k1\_funct\_1\ X0\ np\_\_1)\ (k1\_funct\_1\ X1\ np\_\_1)\ X2))\wedge(k7\_gfacirc2\ np\_\_1\ X0\ X1 = k21\_gfacirc1\ (k1\_funct\_1\ X0\ np\_\_1)\ (k1\_funct\_1\ X1\ np\_\_1)\ X2)))))) \tag{2}$$

Assume the following.

$$\forall X0.k9\_finseq\_1\ X0 = k5\_finseq\_1\ X0 \tag{3}$$

Assume the following.

$$\forall X0.v1\_finseq\_1\ (k5\_finseq\_1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k9\_finseq\_1\ X0))\wedge(v1\_funct\_1\ (k9\_finseq\_1\ X0)) \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(X2 = k4\_tarski\ k1\_xboole\_0\ (k1\_margrel1\ k6\_margrel1\ (k4\_finseq\_2\ k6\_numbers\ k6\_margrel1)\ k8\_margrel1))\Rightarrow((k5\_gfacirc2\ np\_\_1\ (k9\_finseq\_1\ X0)\ (k9\_finseq\_1\ X1) = k2\_circcomb\ (k5\_circcomb\ (k1\_margrel1\ k6\_margrel1\ (k4\_finseq\_2\ k6\_numbers\ k6\_margrel1)\ k8\_margrel1)\ k1\_xboole\_0)\ (k25\_gfacirc1\ X0\ X1\ X2))\wedge((k6\_gfacirc2\ np\_\_1\ (k9\_finseq\_1\ X0)\ (k9\_finseq\_1\ X1) = k3\_circcomb\ (k5\_circcomb\ (k1\_margrel1\ k6\_margrel1\ (k4\_finseq\_2\ k6\_numbers\ k6\_margrel1)\ k8\_margrel1)\ k1\_xboole\_0)\ (k25\_gfacirc1\ X0\ X1\ X2)\ (k7\_circcomb\ k1\_xboole\_0\ k6\_margrel1\ (k1\_margrel1\ k6\_margrel1\ (k4\_finseq\_2\ k6\_numbers\ k6\_margrel1)\ k8\_margrel1)\ k1\_xboole\_0)\ (k26\_gfacirc1\ X0\ X1\ X2))\wedge(k7\_gfacirc2\ np\_\_1\ (k9\_finseq\_1\ X0)\ (k9\_finseq\_1\ X1) = k21\_gfacirc1\ X0\ X1\ X2)))$$