t94_gfacirc1 (TMHeMN8NpNn6JSeReHHrbbrMfbjiLXYyPCe)

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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 $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_card\_3 : \iota \Rightarrow \iota$ be given. Let $u3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k34\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k35\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_margrel1 : \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_twoscomp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k36\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_margrel1 : \iota \Rightarrow \iota$ be given. Let $k9\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 \neq k4\_tarski\ (k10\_finseq\_1\ X0\ X1)\ k4\_gfacirc1) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k4\_card\_3\ (u3\_msualg\_1\ (k34\_gfacirc1\ X0\ X1\ X2)\ (k35\_gfacirc1\ X0\ X1\ X2)))) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ k6\_margrel1) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ k6\_margrel1) \Rightarrow (\forall X6.(m1\_subset\_1\ X6\ k6\_margrel1) \Rightarrow (((X4 = k1\_funct\_1\ X3\ X0) \wedge (X5 = k1\_funct\_1\ X3\ X1) \wedge (X6 = k1\_funct\_1\ X3\ X2))) \Rightarrow ((k1\_twoscomp\ (k34\_gfacirc1\ X0\ X1\ X2)\ (k35\_gfacirc1\ X0\ X1\ X2)\ (k5\_facirc\_1\ (k34\_gfacirc1\ X0\ X1\ X2)\ (k35\_gfacirc1\ X0\ X1\ X2)\ X3\ np\_\_2)\ (k36\_gfacirc1\ X0\ X1\ X2) = k2\_binarith\ (k2\_binarith\ X4\ (k9\_margrel1\ X5))\ (k9\_margrel1\ X6)) \wedge ((k1\_funct\_1\ (k5\_facirc\_1\ (k34\_gfacirc1\ X0\ X1\ X2)\ (k35\_gfacirc1\ X0\ X1\ X2)\ X3\ np\_\_2)\ (k4\_tarski\ (k10\_finseq\_1\ X0\ X1)\ k4\_gfacirc1) = k2\_binarith\ X4\ (k9\_margrel1\ X5)) \wedge ((k1\_funct\_1\ (k5\_facirc\_1\ (k34\_gfacirc1\ X0\ X1\ X2)\ (k35\_gfacirc1\ X0\ X1\ X2)\ X3\ np\_\_2)\ X0 = X4) \wedge ((k1\_funct\_1\ (k5\_facirc\_1\ (k34\_gfacirc1\ X0\ X1\ X2)\ (k35\_gfacirc1\ X0\ X1\ X2)\ X3\ np\_\_2)\ X1 = X5) \wedge (k1\_funct\_1\ (k5\_facirc\_1\ (k34\_gfacirc1\ X0\ X1\ X2)\ (k35\_gfacirc1\ X0\ X1\ X2)\ X3\ np\_\_2)\ X2 = X6)))))))))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k6\_margrel1)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k6\_margrel1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k6\_margrel1)\Rightarrow(k2\_binarith\ (k2\_binarith\ (k9\_margrel1\ X0)\ X1)\ (k9\_margrel1\ X2) = k2\_binarith\ (k2\_binarith\ X0\ (k9\_margrel1\ X1))\ (k9\_margrel1\ X2)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k36\_gfacirc1\ X0\ X1\ X2 = k9\_facirc\_1\ X0\ X1\ X2\ k4\_gfacirc1 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k35\_gfacirc1\ X0\ X1\ X2 = k10\_facirc\_1\ X0\ X1\ X2\ k4\_gfacirc1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k34\_gfacirc1\ X0\ X1\ X2 = k8\_facirc\_1\ X0\ X1\ X2\ k4\_gfacirc1 \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(X2\neq k4\_tarski\ (k10\_finseq\_1\ X0\ X1)\ k4\_gfacirc1)\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k4\_card\_3\ (u3\_msualg\_1\ (k34\_gfacirc1\ X0\ X1\ X2)\ (k35\_gfacirc1\ X0\ X1\ X2))))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ k6\_margrel1)\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ k6\_margrel1)\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ k6\_margrel1)\Rightarrow(((X4 = k1\_funct\_1\ X3\ X0)\wedge((X5 = k1\_funct\_1\ X3\ X1)\wedge(X6 = k1\_funct\_1\ X3\ X2)))\Rightarrow(k1\_twoscomp\ (k34\_gfacirc1\ X0\ X1\ X2)\ (k35\_gfacirc1\ X0\ X1\ X2)\ (k5\_facirc\_1\ (k34\_gfacirc1\ X0\ X1\ X2)\ (k35\_gfacirc1\ X0\ X1\ X2)\ X3\ np\_\_2)\ (k36\_gfacirc1\ X0\ X1\ X2) = k2\_binarith\ (k2\_binarith\ (k9\_margrel1\ X4)\ X5)\ (k9\_margrel1\ X6)))))))$$