

# t93\_gfacirc1

(TMT93KjKxidDvbUpP3D7sKkeeM3J2gAUMTm)

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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  $k1\_twoscomp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k22\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k23\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k24\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (X2 \neq k4\_tarski (k10\_finseq\_1 \\
& X0 X1) k4\_gfacirc1) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k4\_card\_3 (u3\_msualg\_1 \\
& (k22\_gfacirc1 X0 X1 X2) (k23\_gfacirc1 X0 X1 X2)))) \Rightarrow (\forall X4. \\
& (m1\_subset\_1 X4 k6\_margrel1) \Rightarrow (\forall X5. (m1\_subset\_1 X5 k6\_margrel1) \Rightarrow \\
& (\forall X6. (m1\_subset\_1 X6 k6\_margrel1) \Rightarrow (((X4 = k1\_funct\_1 X3 \\
& X0) \wedge ((X5 = k1\_funct\_1 X3 X1) \wedge (X6 = k1\_funct\_1 X3 X2))) \Rightarrow ((k1\_twoscomp \\
& (k22\_gfacirc1 X0 X1 X2) (k23\_gfacirc1 X0 X1 X2) (k5\_facirc\_1 (k22\_gfacirc1 \\
& X0 X1 X2) (k23\_gfacirc1 X0 X1 X2) X3 np\_2) (k24\_gfacirc1 X0 X1 X2) = \\
& k2\_binarith (k2\_binarith X4 (k9\_margrel1 X5)) (k9\_margrel1 X6)) \wedge \\
& ((k1\_funct\_1 (k5\_facirc\_1 (k22\_gfacirc1 X0 X1 X2) (k23\_gfacirc1 \\
& X0 X1 X2) X3 np\_2) (k4\_tarski (k10\_finseq\_1 X0 X1) k4\_gfacirc1) = \\
& k2\_binarith X4 (k9\_margrel1 X5)) \wedge ((k1\_funct\_1 (k5\_facirc\_1 ( \\
& k22\_gfacirc1 X0 X1 X2) (k23\_gfacirc1 X0 X1 X2) X3 np\_2) X0 = X4) \wedge ( \\
& (k1\_funct\_1 (k5\_facirc\_1 (k22\_gfacirc1 X0 X1 X2) (k23\_gfacirc1 \\
& X0 X1 X2) X3 np\_2) X1 = X5) \wedge (k1\_funct\_1 (k5\_facirc\_1 (k22\_gfacirc1 \\
& X0 X1 X2) (k23\_gfacirc1 X0 X1 X2) X3 np\_2) X2 = X6)))))))))) \\
& \hspace{10em} (1)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. k36\_gfacirc1 X0 X1 X2 = k9\_facirc\_1 \\
& X0 X1 X2 k4\_gfacirc1 \hspace{10em} (2)
\end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k35\_gfacirc1 X0 X1 X2 = k10\_facirc.1 X0 X1 X2 k4\_gfacirc1 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k34\_gfacirc1 X0 X1 X2 = k8\_facirc.1 X0 X1 X2 k4\_gfacirc1 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k24\_gfacirc1 X0 X1 X2 = k9\_facirc.1 X0 X1 X2 k4\_gfacirc1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k23\_gfacirc1 X0 X1 X2 = k10\_facirc.1 X0 X1 X2 k4\_gfacirc1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k22\_gfacirc1 X0 X1 X2 = k8\_facirc.1 X0 X1 X2 k4\_gfacirc1 \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(X2 \neq k4\_tarski (k10\_finseq.1 \\ & X0 X1) k4\_gfacirc1) \Rightarrow (\forall X3.(m1\_subset.1 X3 (k4\_card.3 (u3\_msualg.1 \\ & (k34\_gfacirc1 X0 X1 X2) (k35\_gfacirc1 X0 X1 X2)))) \Rightarrow (\forall X4. \\ & (m1\_subset.1 X4 k6\_margrel1) \Rightarrow (\forall X5.(m1\_subset.1 X5 k6\_margrel1) \Rightarrow \\ & (\forall X6.(m1\_subset.1 X6 k6\_margrel1) \Rightarrow (((X4 = k1\_funct.1 X3 \\ & X0) \wedge ((X5 = k1\_funct.1 X3 X1) \wedge (X6 = k1\_funct.1 X3 X2))) \Rightarrow ((k1\_twoscomp \\ & (k34\_gfacirc1 X0 X1 X2) (k35\_gfacirc1 X0 X1 X2) (k5\_facirc.1 (k34\_gfacirc1 \\ & X0 X1 X2) (k35\_gfacirc1 X0 X1 X2) X3 np\_2) (k36\_gfacirc1 X0 X1 X2) = \\ & k2\_binarith (k2\_binarith X4 (k9\_margrel1 X5)) (k9\_margrel1 X6)) \wedge \\ & ((k1\_funct.1 (k5\_facirc.1 (k34\_gfacirc1 X0 X1 X2) (k35\_gfacirc1 \\ & X0 X1 X2) X3 np\_2) (k4\_tarski (k10\_finseq.1 X0 X1) k4\_gfacirc1) = \\ & k2\_binarith X4 (k9\_margrel1 X5)) \wedge ((k1\_funct.1 (k5\_facirc.1 ( \\ & k34\_gfacirc1 X0 X1 X2) (k35\_gfacirc1 X0 X1 X2) X3 np\_2) X0 = X4) \wedge ( \\ & (k1\_funct.1 (k5\_facirc.1 (k34\_gfacirc1 X0 X1 X2) (k35\_gfacirc1 \\ & X0 X1 X2) X3 np\_2) X1 = X5) \wedge (k1\_funct.1 (k5\_facirc.1 (k34\_gfacirc1 \\ & X0 X1 X2) (k35\_gfacirc1 X0 X1 X2) X3 np\_2) X2 = X6)))))))))) \end{aligned}$$