

t58\_gfacirc1 (TMUh-  
HwL5W6G6fDH5muGpPBmdAGby4KkDgau)

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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  $k2\_msafree2 : \iota \Rightarrow \iota$  be given. Let  $k22\_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_margrel1 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. k10\_finseq\_1 X0 X1 = k2\_tarski (k4\_tarski \quad np\_1 X0) (k4\_tarski \quad np\_2 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_funct\_1 X3) \wedge \\ & ((v1\_funct\_2 X3 (k4\_finseq\_2 \quad np\_2 \quad k6\_margrel1) \quad k6\_margrel1) \wedge \\ & (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k4\_finseq\_2 \quad np\_2 \\ & \quad k6\_margrel1) \quad k6\_margrel1)))))) \Rightarrow ((X0 \neq k4\_tarski (k10\_finseq\_1 \\ & X1 X2) X3) \Rightarrow (k2\_msafree2 (k8\_facirc\_1 X1 X2 X0 X3) = k1\_enumset1 X1 \\ & \quad X2 X0)) \end{aligned} \quad (2)$$

Assume the following.

$$(v1\_funct\_1 \quad k4\_gfacirc1) \wedge ((v1\_funct\_2 \quad k4\_gfacirc1 \quad (k4\_finseq\_2 \quad np\_2 \quad k6\_margrel1) \quad k6\_margrel1) \wedge (m1\_subset\_1 \quad k4\_gfacirc1 \quad (k1\_zfmisc\_1 \quad (k2\_zfmisc\_1 \quad (k4\_finseq\_2 \quad np\_2 \quad k6\_margrel1) \quad k6\_margrel1)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k22\_gfacirc1 X0 X1 X2 = k8\_facirc\_1 X0 X1 X2 \quad k4\_gfacirc1 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (X3 = k1\_enumset1 X0 X1 X2) \Leftrightarrow (\forall X4. (X4 \in X3) \Leftrightarrow (\neg (X4 \neq X0) \wedge ((X4 \neq X1) \wedge (X4 \neq X2)))) \quad (5)$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.(X2 \neq k4\_tarski (k10\_finseq\_1 \\ X0 X1) k4\_gfacirc1) \Rightarrow ((X0 \in k2\_msafree2 (k22\_gfacirc1 X0 X1 X2)) \wedge \\ ((X1 \in k2\_msafree2 (k22\_gfacirc1 X0 X1 X2)) \wedge (X2 \in k2\_msafree2 (k22\_gfacirc1 \\ X0 X1 X2))))$$