

t51\_facirc\_1  
(TMbq11jZu3vLLn9Uo1bqkzdTTdDk5CCsp86)

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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  $np\_2 : \iota$  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  $k4\_card\_3 : \iota \Rightarrow \iota$  be given. Let  $u3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_circuit2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_circuit2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k7\_circcomb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X2) \wedge (v1\_finset\_1 \\ & X2)) \Rightarrow (\forall X3. ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 (k4\_finseq\_2 \\ & np\_2 X2) X2) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k4\_finseq\_2 \\ & np\_2 X2) X2)))))) \Rightarrow (\forall X4. (m1\_subset\_1 X4 (k4\_card\_3 (u3\_msualg\_1 \\ & (k5\_circcomb X3 (k10\_finseq\_1 X0 X1)) (k7\_circcomb np\_2 X2 X3 ( \\ & k10\_finseq\_1 X0 X1)))))) \Rightarrow (v1\_circuit2 (k6\_circuit2 (k5\_circcomb \\ & X3 (k10\_finseq\_1 X0 X1)) (k7\_circcomb np\_2 X2 X3 (k10\_finseq\_1 \\ & X0 X1)) X4) (k5\_circcomb X3 (k10\_finseq\_1 X0 X1)) (k7\_circcomb np\_2 \\ & X2 X3 (k10\_finseq\_1 X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\neg v1\_xboole\_0 k6\_margrel1 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. v1\_finset\_1 (k2\_tarski X0 X1) \tag{3}$$

Assume the following.

$$k6\_margrel1 = k2\_tarski k6\_numbers np\_1 \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((v1\_funct\_1 X2)\wedge((v1\_funct\_2 \\
& X2 (k4\_finseq\_2 np\_2 k6\_margrel1) k6\_margrel1)\wedge(m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k4\_finseq\_2 np\_2 k6\_margrel1) \\
& k6\_margrel1))))\Rightarrow(k6\_facirc\_1 X0 X1 X2 = k7\_circcomb np\_2 k6\_margrel1 \\
& X2 (k10\_finseq\_1 X0 X1))
\end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((v1\_funct\_1 X2)\wedge((v1\_funct\_2 \\
& X2 (k4\_finseq\_2 np\_2 k6\_margrel1) k6\_margrel1)\wedge(m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k4\_finseq\_2 np\_2 k6\_margrel1) \\
& k6\_margrel1))))\Rightarrow(\forall X3.(m1\_subset\_1 X3 (k4\_card\_3 (u3\_msualg\_1 \\
& (k5\_circcomb X2 (k10\_finseq\_1 X0 X1)) (k6\_facirc\_1 X0 X1 X2))))\Rightarrow \\
& (v1\_circuit2 (k6\_circuit2 (k5\_circcomb X2 (k10\_finseq\_1 X0 X1)) \\
& (k6\_facirc\_1 X0 X1 X2) X3) (k5\_circcomb X2 (k10\_finseq\_1 X0 X1)) \\
& (k6\_facirc\_1 X0 X1 X2)))
\end{aligned}$$