

## 119\_glib\_002

(TMb4eGN9smCpSQV75ECqvm39xTX19NUyPJr)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_glib\_000 : \iota \Rightarrow o$  be given. Let  $v1\_glib\_002 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_glib\_000 : \iota \Rightarrow \iota$  be given. Let  $k1\_glib\_002 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \quad (4)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0))))) \Rightarrow (\neg v1\_xboole\_0 (k6\_glib\_000 X0)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0))))) \wedge (m1\_subset\_1 X1 (k6\_glib\_000 X0))) \Rightarrow ((\neg v1\_xboole\_0 (k1\_glib\_002 X0 X1)) \wedge (m1\_subset\_1 (k1\_glib\_002 X0 X1) (k1\_zfmisc\_1 (k6\_glib\_000 X0)))) \quad (6)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\
& X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 \\
& X1 (k6\_glib\_000 X0)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k6\_glib\_000 X0)))) \Rightarrow ((X2 = k1\_glib\_002 X0 X1) \Leftrightarrow \\
& (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.(m3\_glib\_001 X4 X0) \wedge (r1\_glib\_001 \\
& X0 X1 X3 X4)))))) \tag{7}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\
& X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))) \Rightarrow ((v1\_glib\_002 X0) \Leftrightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (k6\_glib\_000 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& X2 (k6\_glib\_000 X0)) \Rightarrow (\exists X3.(m3\_glib\_001 X3 X0) \wedge (r1\_glib\_001 \\
& X0 X1 X2 X3)))))) \tag{8}
\end{aligned}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\
& X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))) \Rightarrow ((v1\_glib\_002 X0) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (k6\_glib\_000 X0)) \Rightarrow (k1\_glib\_002 X0 \\
& X1 = k6\_glib\_000 X0)))
\end{aligned}$$