

## l7\_glib\_002

(TMMJYsN6pBfxpVLM6fFrrxUJqGLeL5woCzq)

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_glib\_000 : \iota \Rightarrow \iota$  be given. Let  $k1\_glib\_002 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 (k6\_glib\_000 X0)) \Rightarrow ((k3\_finseq\_1 (k1\_glib\_001 X0 X1) = np\_1) \wedge \\ & ((k1\_funct\_1 (k1\_glib\_001 X0 X1) np\_1 = X1) \wedge ((k3\_glib\_001 X0 ( \\ & k1\_glib\_001 X0 X1) = X1) \wedge ((k4\_glib\_001 X0 (k1\_glib\_001 X0 X1) = X1) \wedge \\ & (r1\_glib\_001 X0 X1 X1 (k1\_glib\_001 X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge \\ & ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \wedge (m1\_subset\_1 \\ & X1 (k6\_glib\_000 X0)) \Rightarrow ((\neg v1\_xboole\_0 (k1\_glib\_002 X0 X1)) \wedge (m1\_subset\_1 \\ & (k1\_glib\_002 X0 X1) (k1\_zfmisc\_1 (k6\_glib\_000 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge \\ & ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \wedge (m1\_subset\_1 \\ & X1 (k6\_glib\_000 X0)) \Rightarrow (m3\_glib\_001 (k1\_glib\_001 X0 X1) X0) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\
& X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\
& X1 (k6\_glib\_000 X0)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k6\_glib\_000 X0)))) \Rightarrow ((X2 = k1\_glib\_002 X0 X1) \Leftrightarrow \\
& (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.(m3\_glib\_001 X4 X0) \wedge (r1\_glib\_001 \\
& X0 X1 X3 X4)))))) \tag{4}
\end{aligned}$$

**Theorem 1**

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