

# t77\_glib\_000 (TMQnoA- ZLXhkk6oAvgH1t9cohG2Se5wzHsNM)

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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  $m1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k22\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k23\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r4\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_glib\_000 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m1\_glib\_000 \\ & X1 X0) \Rightarrow (\forall X2.\forall X3.\forall X4.((r1\_glib\_000 X1 X2 X3 \\ & X4) \Rightarrow (r1\_glib\_000 X0 X2 X3 X4)) \wedge ((r2\_glib\_000 X1 X2 X3 X4) \Rightarrow (r2\_glib\_000 \\ & X0 X2 X3 X4)) \wedge ((r3\_glib\_000 X1 X2 X3 X4) \Rightarrow (r3\_glib\_000 X0 X2 X3 X4)) \wedge \\ & ((r4\_glib\_000 X1 X2 X3 X4) \Rightarrow (r4\_glib\_000 X0 X2 X3 X4)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m1\_glib\_000 \\ & X1 X0) \Rightarrow ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X1) \wedge ((v1\_finset\_1 X1) \wedge (v1\_glib\_000 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 \\ & X0 k5\_numbers) \wedge ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 \\ & X0)))))) \Rightarrow (m1\_subset\_1 (k23\_glib\_000 X0 X1 X2) (k1\_zfmisc\_1 (k7\_glib\_000 \\ & X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\Rightarrow(m1\_subset\_1 (k22\_glib\_000 X0 X1 X2) (k1\_zfmisc\_1 (k7\_glib\_000 X0))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \quad (5)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\Rightarrow(\forall X1.\forall X2.\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (k7\_glib\_000 X0)))\Rightarrow(X3 = k23\_glib\_000 X0 X1 X2)\Leftrightarrow(\forall X4.(X4 \in X3)\Leftrightarrow(r4\_glib\_000 X0 X1 X2 X4))) \quad (6)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\Rightarrow(\forall X1.\forall X2.\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (k7\_glib\_000 X0)))\Rightarrow(X3 = k22\_glib\_000 X0 X1 X2)\Leftrightarrow(\forall X4.(X4 \in X3)\Leftrightarrow(r3\_glib\_000 X0 X1 X2 X4))) \quad (7)$$

**Theorem 1**

$$\forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\Rightarrow(\forall X1.(m1\_glib\_000 X1 X0)\Rightarrow(\forall X2.\forall X3.(r1\_tarski (k22\_glib\_000 X1 X2 X3) (k23\_glib\_000 X0 X2 X3))\wedge(r1\_tarski (k23\_glib\_000 X1 X2 X3) (k23\_glib\_000 X0 X2 X3))))$$