

t46\_glib\_000 (TMbqF-  
BtX2HxMgRFrHvGSaG4HWtZrUCqYn5y)

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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  $m2\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_glib\_000 : \iota \Rightarrow \iota$  be given. Let  $k21\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k24\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k25\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_glib\_000 : \iota \Rightarrow \iota$  be given. Let  $r5\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_glib\_000 : \iota \Rightarrow \iota$  be given. Let  $k11\_glib\_000 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0. (&(v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ &X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))) \Rightarrow (\forall X1. (m1\_glib\_000 \\ &X1 X0) \Rightarrow (\forall X2. (m1\_glib\_000 X2 X0) \Rightarrow (((r1\_tarski (k24\_glib\_000 \\ &X0 X1) (k24\_glib\_000 X0 X2)) \wedge (r1\_tarski (k25\_glib\_000 X0 X1) (k25\_glib\_000 \\ &X0 X2))) \Rightarrow (m1\_glib\_000 X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (&((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge \\ &((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))) \wedge (m1\_glib\_000 \\ &X1 X0)) \Rightarrow (k25\_glib\_000 X0 X1 = k7\_glib\_000 X1) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (&((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge \\ &((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))) \wedge (m1\_glib\_000 \\ &X1 X0)) \Rightarrow (k24\_glib\_000 X0 X1 = k6\_glib\_000 X1) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\Rightarrow(\forall X3.(m2\_glib\_000 X3 X0 X1 X2)\Rightarrow(m1\_glib\_000 X3 X0)) \quad (5)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\Rightarrow(\forall X1.(m1\_glib\_000 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge((v4\_relat\_1 X1 k5\_numbers)\wedge((v1\_funct\_1 X1)\wedge((v1\_finset\_1 X1)\wedge(v1\_glib\_000 X1)))))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\wedge(m1\_glib\_000 X1 X0)\Rightarrow(m1\_subset\_1 (k25\_glib\_000 X0 X1) (k1\_zfmisc\_1 (k7\_glib\_000 X0))) \quad (7)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\Rightarrow(\forall X1.\forall X2.\forall X3.(m1\_glib\_000 X3 X0)\Rightarrow((((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k6\_glib\_000 X0))))\wedge(r1\_tarski X2 (k21\_glib\_000 X0 X1)))\Rightarrow((m2\_glib\_000 X3 X0 X1 X2)\Leftrightarrow((k24\_glib\_000 X0 X3 = X1)\wedge(k25\_glib\_000 X0 X3 = X2))))\wedge(\neg(\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k6\_glib\_000 X0))))\wedge(r1\_tarski X2 (k21\_glib\_000 X0 X1)))\Rightarrow((m2\_glib\_000 X3 X0 X1 X2)\Leftrightarrow(r5\_glib\_000 X3 X0)))) \quad (8)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\Rightarrow(\forall X1.((v1\_relat\_1 X1)\wedge((v4\_relat\_1 X1 k5\_numbers)\wedge((v1\_funct\_1 X1)\wedge((v1\_finset\_1 X1)\wedge(v1\_glib\_000 X1))))))\Rightarrow((r5\_glib\_000 X0 X1)\Leftrightarrow((k6\_glib\_000 X0 = k6\_glib\_000 X1)\wedge((k7\_glib\_000 X0 = k7\_glib\_000 X1)\wedge((r1\_funct\_2 (k7\_glib\_000 X0) (k6\_glib\_000 X0) (k7\_glib\_000 X1) (k6\_glib\_000 X1) (k10\_glib\_000 X0) (k10\_glib\_000 X1))\wedge(r1\_funct\_2 (k7\_glib\_000 X0) (k6\_glib\_000 X0) (k7\_glib\_000 X1) (k6\_glib\_000 X1) (k11\_glib\_000 X0) (k11\_glib\_000 X1)))))) \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & \quad X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & \quad \forall X3. \forall X4. \forall X5. (m2\_glib\_000 X5 X0 X1 X3) \Rightarrow (\forall X6. \\ (m2\_glib\_000 X6 X0 X2 X4) \Rightarrow & (((r1\_tarski X2 X1) \wedge (r1\_tarski X4 X3) \wedge \\ & ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k6\_glib\_000 \\ X0)))) \wedge (r1\_tarski X4 (k21\_glib\_000 X0 X2)))))) \Rightarrow (m1\_glib\_000 X6 \\ & \quad X5)))) \end{aligned}$$