

t36\_glib\_003 (TMRt-  
fLb5uT95zbQuhSQ38PQTZAVpJnXRApF)

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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  $v2\_glib\_003 : \iota \Rightarrow o$  be given. Let  $v3\_glib\_003 : \iota \Rightarrow o$  be given. Let  $k7\_glib\_003 : \iota \Rightarrow \iota$  be given. Let  $k12\_glib\_003 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $np\_7 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_6 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k3\_glib\_003 : \iota$  be given. Let  $k4\_glib\_003 : \iota$  be given. Let  $k7\_glib\_000 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_glib\_003 : \iota \Rightarrow \iota$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge (v1\_finset\_1 X0)))) \Rightarrow (\forall X1. \forall X2. (v7\_ordinal1 \\ X2) \Rightarrow (\forall X3. (v7\_ordinal1 X3) \Rightarrow ((X2 \neq X3) \Rightarrow (k1\_funct\_1 X0 X3 = \\ k1\_funct\_1 (k13\_glib\_000 X0 X2 X1) X3)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0 np\_7) \wedge (m2\_subset\_1 np\_7 k1\_numbers k5\_numbers)) \wedge \\ ((m1\_subset\_1 np\_7 k5\_numbers) \wedge (m1\_subset\_1 np\_7 k1\_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0 np\_6) \wedge (m2\_subset\_1 np\_6 k1\_numbers k5\_numbers)) \wedge \\ ((m1\_subset\_1 np\_6 k5\_numbers) \wedge (m1\_subset\_1 np\_6 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge \\ & ((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge((v1\_glib\_000 X0)\wedge(v3\_glib\_003 \\ & X0))))))\Rightarrow((v1\_relat\_1 (k13\_glib\_000 X0 k3\_glib\_003 X1))\wedge((v4\_relat\_1 \\ & (k13\_glib\_000 X0 k3\_glib\_003 X1) k5\_numbers)\wedge((v1\_funct\_1 (k13\_glib\_000 \\ & X0 k3\_glib\_003 X1))\wedge((v1\_finset\_1 (k13\_glib\_000 X0 k3\_glib\_003 \\ & X1))\wedge(v3\_glib\_003 (k13\_glib\_000 X0 k3\_glib\_003 X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge \\ & ((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))\Rightarrow(( \\ & v1\_relat\_1 (k13\_glib\_000 X0 k3\_glib\_003 X1))\wedge((v4\_relat\_1 (k13\_glib\_000 \\ & X0 k3\_glib\_003 X1) k5\_numbers)\wedge((v1\_funct\_1 (k13\_glib\_000 X0 \\ & k3\_glib\_003 X1))\wedge((v1\_finset\_1 (k13\_glib\_000 X0 k3\_glib\_003 \\ & X1))\wedge(v1\_glib\_000 (k13\_glib\_000 X0 k3\_glib\_003 X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 \\ & X0)\wedge((v1\_finset\_1 X0)\wedge((v1\_glib\_000 X0)\wedge(v3\_glib\_003 X0))))))\Rightarrow \\ & (k7\_glib\_003 X0 = k1\_funct\_1 X0 k4\_glib\_003) \end{aligned} \quad (7)$$

Assume the following.

$$k4\_glib\_003 = np\_7 \quad (8)$$

Assume the following.

$$k3\_glib\_003 = np\_6 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 \\ & X0)\wedge((v1\_finset\_1 X0)\wedge((v1\_glib\_000 X0)\wedge(v2\_glib\_003 X0))))))\Rightarrow \\ & (\forall X1.\forall X2.((X1 \in k7\_glib\_000 X0)\Rightarrow(k12\_glib\_003 X0 \\ & X1 X2 = k13\_glib\_000 X0 k3\_glib\_003 (k1\_funct\_4 (k6\_glib\_003 X0) \\ & (k16\_funcop\_1 X1 X2))))\wedge((\neg X1 \in k7\_glib\_000 X0)\Rightarrow(k12\_glib\_003 \\ & X0 X1 X2 = X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (11)$$

### Theorem 1

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 \\ & X0)\wedge((v1\_finset\_1 X0)\wedge((v1\_glib\_000 X0)\wedge((v2\_glib\_003 X0)\wedge \\ & (v3\_glib\_003 X0))))))\Rightarrow(\forall X1.\forall X2.k7\_glib\_003 X0 = \\ & k7\_glib\_003 (k12\_glib\_003 X0 X1 X2)) \end{aligned}$$