

# t72\_glib\_001 (TMKdPf- Moz4mk1doKtV1h2QSuhwgAkWC1tvX)

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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  $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_abian : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $m1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m3\_glib\_001 \\ & X1 X0) \Rightarrow (\forall X2.((\neg v1\_abian X2) \wedge (m1\_subset\_1 X2 k5\_numbers)) \Rightarrow \\ & ((r1\_xxreal\_0 X2 (k3\_finseq\_1 X1)) \Rightarrow ((k6\_xcmplx\_0 (k4\_nat\_1 np\_2 \\ & (k3\_nat\_d (k2\_nat\_1 X2 np\_1) np\_2)) np\_1 = X2) \wedge ((r1\_xxreal\_0 \\ & np\_1 (k3\_nat\_d (k2\_nat\_1 X2 np\_1) np\_2)) \wedge (r1\_xxreal\_0 (k3\_nat\_d \\ & (k2\_nat\_1 X2 np\_1) np\_2) (k3\_finseq\_1 (k11\_glib\_001 X0 X1)))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers)\wedge(v7\_ordinal1 X1))\Rightarrow(k2\_nat\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (5)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0)\wedge(v7\_ordinal1 X1))\Rightarrow(v7\_ordinal1 (k2\_xcmplx\_0 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0)\wedge(v7\_ordinal1 X1))\Rightarrow(m1\_subset\_1 (k3\_nat\_d X0 X1) k5\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\wedge(m3\_glib\_001 X1 X0))\Rightarrow(m1\_glib\_001 (k11\_glib\_001 X0 X1) X0) \quad (9)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\Rightarrow(\forall X1.(m3\_glib\_001 X1 X0)\Rightarrow(\forall X2.(v7\_ordinal1 X2)\Rightarrow(((r1\_xxreal\_0 X2 (k3\_finseq\_1 X1))\Rightarrow((v1\_abian X2)\vee(k5\_glib\_001 X0 X1 X2 = k1\_funct\_1 X1 X2))))\wedge(((\neg(\neg v1\_abian X2)\wedge(r1\_xxreal\_0 X2 (k3\_finseq\_1 X1)))\Rightarrow(k5\_glib\_001 X0 X1 X2 = k3\_glib\_001 X0 X1)))))) \quad (10)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v1\_funct\_1 X0)\wedge((v1\_finset\_1 X0)\wedge(v1\_glib\_000 X0))))))\Rightarrow(\forall X1.(m3\_glib\_001 X1 X0)\Rightarrow(\forall X2.(m1\_glib\_001 X2 X0)\Rightarrow((X2 = k11\_glib\_001 X0 X1)\Leftrightarrow(((k2\_nat\_1 (k3\_finseq\_1 X1) np\_1 = k4\_nat\_1 np\_2 (k3\_finseq\_1 X2))\wedge(\forall X3.(v7\_ordinal1 X3)\Rightarrow(((r1\_xxreal\_0 np\_1 X3)\wedge(r1\_xxreal\_0 X3 (k3\_finseq\_1 X2)))\Rightarrow(k1\_funct\_1 X2 X3 = k1\_funct\_1 X1 (k6\_xcmplx\_0 (k4\_nat\_1 np\_2 X3) np\_1)))))))))) \quad (11)$$

Assume the following.

$$\forall X0.((v3\_ordinal1 X0)\wedge(v1\_finset\_1 X0))\Rightarrow(v7\_ordinal1 X0) \quad (12)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow(v3\_ordinal1 X1)) \quad (13)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v1\_finset\_1 X0) \quad (14)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m3\_glib\_001 \\ & X1 X0) \Rightarrow (\forall X2.((\neg v1\_abian X2) \wedge (m1\_subset\_1 X2 k5\_numbers)) \Rightarrow \\ & ((r1\_xxreal\_0 X2 (k3\_finseq\_1 X1)) \Rightarrow (k5\_glib\_001 X0 X1 X2 = k1\_funct\_1 \\ & (k11\_glib\_001 X0 X1) (k3\_nat\_d (k2\_nat\_1 X2 np\_1) np\_2)))))) \end{aligned}$$