

t26\_helly (TMZCv-  
naeMrQ1WZEXNHdXDAMqP JfZPogPqw7)

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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  $v3\_glib\_002 : \iota \Rightarrow o$  be given. Let  $v5\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_abian : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k4\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1. (m3\_glib\_001 \\ X1 X0) \Rightarrow ((\neg(\neg v3\_glib\_001 X1 X0) \wedge (k3\_finseq\_1 X1 = np\_1)) \wedge (\neg(k3\_finseq\_1 \\ X1 \neq np\_1) \wedge (v3\_glib\_001 X1 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$r1\_xxreal\_0 np\_1 np\_1 \quad (3)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1. (m3\_glib\_001 \\ X1 X0) \Rightarrow (k4\_glib\_001 X0 X1 = k1\_funct\_1 X1 (k3\_finseq\_1 X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1. (m3\_glib\_001 \\ X1 X0) \Rightarrow (k3\_glib\_001 X0 X1 = k1\_funct\_1 X1 np\_1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m3\_glib\_001 \\ X1 X0) \Rightarrow ((v5\_glib\_001 X1 X0) \Leftrightarrow ((v4\_glib\_001 X1 X0) \wedge (\forall X2. \\ ((\neg v1\_abian X2) \wedge (m1\_subset\_1 X2 k5\_numbers)) \Rightarrow (\forall X3.(( \\ \neg v1\_abian X3) \wedge (m1\_subset\_1 X3 k5\_numbers)) \Rightarrow (((r1\_xxreal\_0 X3 \\ (k3\_finseq\_1 X1)) \wedge (k1\_funct\_1 X1 X2 = k1\_funct\_1 X1 X3)) \Rightarrow ((r1\_xxreal\_0 \\ X3 X2) \vee ((X2 = np\_1) \wedge (X3 = k3\_finseq\_1 X1)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m3\_glib\_001 \\ X1 X0) \Rightarrow ((v1\_glib\_001 X1 X0) \Leftrightarrow (k3\_glib\_001 X0 X1 = k4\_glib\_001 X0 \\ X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Leftrightarrow (X0 \in k4\_ordinal1) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge ((v1\_glib\_000 X0) \wedge (v3\_glib\_002 X0)))))) \Rightarrow \\ (\forall X1.(m3\_glib\_001 X1 X0) \Rightarrow (((\neg v3\_glib\_001 X1 X0) \wedge (v5\_glib\_001 \\ X1 X0)) \Rightarrow ((\neg v1\_glib\_001 X1 X0) \wedge (v5\_glib\_001 X1 X0)))) \end{aligned} \quad (10)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge ((v1\_glib\_000 X0) \wedge (v3\_glib\_002 X0)))))) \Rightarrow \\ (\forall X1.((v5\_glib\_001 X1 X0) \wedge (m3\_glib\_001 X1 X0)) \Rightarrow (\forall X2. \\ ((v7\_ordinal1 X2) \wedge (\neg v1\_abian X2)) \Rightarrow (\forall X3.((v7\_ordinal1 \\ X3) \wedge (\neg v1\_abian X3)) \Rightarrow (\neg(\neg r1\_xxreal\_0 X3 X2) \wedge ((r1\_xxreal\_0 X3 \\ (k3\_finseq\_1 X1)) \wedge (k1\_funct\_1 X1 X2 = k1\_funct\_1 X1 X3)))))) \end{aligned}$$