

# t11\_helly (TMNtZKHdpCzHFRsKjDCy- wjFG2EwMqqCGY7V)

October 27, 2020

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  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Assume the following.

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

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1\_relat\_1 X0) \wedge \\ & ((v4\_relat\_1 X0 k5\_numbers) \wedge (v1\_funct\_1 X0) \wedge (v1\_finset\_1 \\ & X0) \wedge (v1\_glib\_000 X0)))) \wedge (((v3\_glib\_001 X1 X0) \wedge (m3\_glib\_001 \\ & X1 X0)) \wedge ((m1\_subset\_1 X2 k5\_numbers) \wedge (m1\_subset\_1 X3 k5\_numbers))) \Rightarrow \\ & (v3\_glib\_001 (k8\_glib\_001 X0 X1 X2 X3) X0) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Leftrightarrow (X0 \in k4\_ordinal1) \quad (4)$$

## Theorem 1

$$\begin{aligned} & \forall X0. (((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge (v1\_funct\_1 \\ & X0) \wedge (v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))) \Rightarrow (\forall X1. (m3\_glib\_001 \\ & X1 X0) \Rightarrow (\forall X2. (v7\_ordinal1 X2) \Rightarrow (\forall X3. (v7\_ordinal1 \\ & X3) \Rightarrow (\neg(\neg(v3\_glib\_001 (k8\_glib\_001 X0 X1 X2 X3) X0) \wedge (v3\_glib\_001 \\ & X1 X0)))))) \end{aligned}$$