

t10_helly (TMN-
vHNm7rEvChWbYm37kSBCQ6fxDvD2wbmp)

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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ 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 $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k2_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $k7_glib_000 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_abian : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k5_numbers) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge \\ (v1_finseq_1 X2))) \Rightarrow (r1_xxreal_0 (k3_finseq_1 (k1_graph_2 X2 \\ X0 X1)) (k3_finseq_1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (k3_finseq_1 X0 = k1_card_1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_finseq_1 X1 X0)\wedge((v7_ordinal1 X2)\wedge(v7_ordinal1 X3)))\Rightarrow(k2_graph_2 X0 X1 X2 X3 = k1_graph_2 X1 X2 X3) \quad (6)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0)\Rightarrow((v1_finset_1 (k1_card_1 X0))\wedge(v1_card_1 (k1_card_1 X0))) \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge((v1_finset_1 X0)\wedge(v1_glib_000 X0)))))\Rightarrow(\forall X1.(m3_glib_001 X1 X0)\Rightarrow(m2_finseq_1 X1 (k2_xboole_0 (k6_glib_000 X0) (k7_glib_000 X0)))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (10)$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Leftrightarrow(X0 \in k4_ordinal1) \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge((v1_finset_1 X0)\wedge(v1_glib_000 X0)))))\Rightarrow(\forall X1.(m3_glib_001 X1 X0)\Rightarrow(\forall X2.(v7_ordinal1 X2)\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow(((r1_xxreal_0 X2 X3)\wedge(r1_xxreal_0 X3 (k3_finseq_1 X1)))\Rightarrow((v1_abian X2)\vee((v1_abian X3)\vee(k8_glib_001 X0 X1 X2 X3 = k2_graph_2 (k2_xboole_0 (k6_glib_000 X0) (k7_glib_000 X0)) X1 X2 X3))))\wedge(\neg(\neg v1_abian X2)\wedge(\neg v1_abian X3)\wedge((r1_xxreal_0 X2 X3)\wedge(r1_xxreal_0 X3 (k3_finseq_1 X1))))))\Rightarrow(k8_glib_001 X0 X1 X2 X3 = X1)))))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0)\wedge(v1_finset_1 X0))\Rightarrow(v7_ordinal1 X0) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xxreal_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow ((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finset_1 X0))) \quad (17)$$

Assume the following.

$$\forall X0.(v1_card_1 X0)\Rightarrow(v3_ordinal1 X0) \quad (18)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge((v1_finset_1 X0)\wedge(v1_glib_000 X0)))))\Rightarrow(\forall X1.(m3_glib_001 X1 X0)\Rightarrow(\forall X2.(v7_ordinal1 X2)\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow(r1_xxreal_0 (k3_finseq_1 (k8_glib_001 X0 X1 X2 X3)) (k3_finseq_1 X1))))))$$