

t15_sppol_2
(TMcUuajRpezYAbSXi9GyAehbwLt4s1bkz3M)

October 27, 2020

Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k2_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k5_numbers) \wedge (v7_ordinal1 \\ & \quad X1)) \Rightarrow (k2_nat_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7_ordinal1 \ X0) \wedge (m1_subset_1 \ X1 \ k5_numbers)) \Rightarrow \\ & \quad (k1_nat_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m2_finseq_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0))) \Rightarrow (k3_topreal1\ X0\ X1 = k3_tarski\ (ReplSep\ (toset \\ (\lambda X2 : \iota.m1_subset_1\ X2\ k5_numbers))\ (\lambda X2 : \iota.(r1_xxreal_0 \\ np_1\ X2) \wedge (r1_xxreal_0\ (k2_nat_1\ X2\ np_1)\ (k3_finseq_1\ X1))) \\ (\lambda X2 : \iota.k2_topreal1\ X0\ X1\ X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k3_tarski\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.(X2 \in X3) \wedge (X3 \in X0))) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m2_finseq_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0))) \Rightarrow (\forall X2.(v7_ordinal1\ X2) \Rightarrow (((r1_xxreal_0 \\ np_1\ X2) \wedge (r1_xxreal_0\ (k1_nat_1\ X2\ np_1)\ (k3_finseq_1\ X1))) \Rightarrow \\ (k2_topreal1\ X0\ X1\ X2 = k1_rttopsp1\ (k15_euclid\ X0)\ (k7_partfun1 \\ (u1_struct_0\ (k15_euclid\ X0))\ X1\ X2)\ (k7_partfun1\ (u1_struct_0 \\ (k15_euclid\ X0))\ X1\ (k1_nat_1\ X2\ np_1)))) \wedge ((\neg(r1_xxreal_0\ np_1 \\ X2) \wedge (r1_xxreal_0\ (k1_nat_1\ X2\ np_1)\ (k3_finseq_1\ X1))) \Rightarrow (k2_topreal1 \\ X0\ X1\ X2 = k1_xboole_0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.(m2_finseq_1\ X0\ (u1_struct_0\ (k15_euclid\ np_2))) \Rightarrow \\ (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k15_euclid\ np_2))) \Rightarrow \\ (\forall X2.(m1_subset_1\ X2\ k5_numbers) \Rightarrow (((r1_xxreal_0\ np_1 \\ X2) \wedge ((r1_xxreal_0\ (k2_nat_1\ X2\ np_1)\ (k3_finseq_1\ X0)) \wedge (X1 \in \\ k1_rttopsp1\ (k15_euclid\ np_2)\ (k7_partfun1\ (u1_struct_0\ (k15_euclid \\ np_2))\ X0\ X2)\ (k7_partfun1\ (u1_struct_0\ (k15_euclid\ np_2))\ X0 \\ (k2_nat_1\ X2\ np_1)))))) \Rightarrow (X1 \in k3_topreal1\ np_2\ X0)))) \end{aligned}$$