

t43_sppol_2 (TMHMytgspN- RhKjUqZc2h4jhMQ6TQbR7AmdF)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $v4_topreal1 : \iota \Rightarrow o$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_topreal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v2_finseq_1 : \iota \Rightarrow o$ be given. Let $v3_topreal1 : \iota \Rightarrow o$ be given. Let $v2_topreal1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \neq X1) \Leftrightarrow (v2_funct_1 (k10_finseq_1 X0 X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 \\ & X2) \wedge (v1_finseq_1 X2))) \Rightarrow ((X2 = k10_finseq_1 X0 X1) \Leftrightarrow ((k3_finseq_1 \\ & X2 = np_2) \wedge ((k1_funct_1 X2 np_1 = X0) \wedge (k1_funct_1 X2 np_2 = X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (((k17_euclid X0 = k17_euclid X1) \vee (k18_euclid X0 = k18_euclid X1)) \Rightarrow \\ & (v1_topreal1 (k2_finseq_4 (u1_struct_0 (k15_euclid np_2)) X0 \\ & X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$r1_xxreal_0 np_2 np_2 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(k2_finseq_4 X0 X1 X2 = k10_finseq_1 X1 X2) \quad (5)$$

Assume the following.

$$\exists X0.(m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\wedge((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v5_relat_1 X0 (u1_struct_0 (k15_euclid np_2)))\wedge((v1_funct_1 X0)\wedge((v1_finset_1 X0)\wedge((v1_finseq_1 X0)\wedge((v2_finseq_1 X0)\wedge(v4_topreal1 X0)))))))) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(v3_topreal1 (k2_finseq_4 (u1_struct_0 (k15_euclid np_2)) X0 X1))) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(v2_topreal1 (k2_finseq_4 (u1_struct_0 (k15_euclid np_2)) X0 X1))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k10_finseq_1 X0 X1))\wedge(v1_funct_1 (k10_finseq_1 X0 X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.v1_finseq_1 (k10_finseq_1 X0 X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(m2_finseq_1 (k2_finseq_4 X0 X1 X2) X0) \quad (11)$$

Assume the following.

$$\forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow((v4_topreal1 X0)\Leftrightarrow((v2_funct_1 X0)\wedge((r1_xxreal_0 np_2 (k3_finseq_1 X0))\wedge((v2_topreal1 X0)\wedge((v3_topreal1 X0)\wedge(v1_topreal1 X0)))))) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v5_relat_1 \\ X1 X0)) \Rightarrow ((v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ ((v4_topreal1 X0) \Rightarrow (\neg v1_xboole_0 X0)) \end{aligned} \quad (14)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ (\neg(X0 \neq X1) \wedge (((k17_euclid X0 = k17_euclid X1) \vee (k18_euclid X0 = k18_euclid \\ X1)) \wedge (\neg v4_topreal1 (k2_finseq_4 (u1_struct_0 (k15_euclid np_2)) \\ X0 X1))))) \end{aligned}$$