

# t13\_sppol\_1 (TM- RQw7tF3RtAga64r3EBCdhACTLNaGVQqQe)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. 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  $r1\_sppol\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v6\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v7\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v8\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 \\ & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \tag{2}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7\_ordinal1 X0) \Rightarrow ((v2\_pre\_topc (k15\_euclid X0)) \wedge \\ & ((v13\_algstr\_0 (k15\_euclid X0)) \wedge ((v2\_rlvect\_1 (k15\_euclid X0)) \wedge \\ & ((v3\_rlvect\_1 (k15\_euclid X0)) \wedge ((v4\_rlvect\_1 (k15\_euclid X0)) \wedge \\ & ((v5\_rlvect\_1 (k15\_euclid X0)) \wedge ((v6\_rlvect\_1 (k15\_euclid X0)) \wedge \\ & ((v7\_rlvect\_1 (k15\_euclid X0)) \wedge ((v8\_rlvect\_1 (k15\_euclid X0)) \wedge \\ & (v5\_rltopsp1 (k15\_euclid X0)))))))))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((\neg v2\_struct\_0\ (k15\_euclid\ X0))\wedge (v5\_rltopsp1\ (k15\_euclid\ X0))) \quad (6)$$

Assume the following.

$$\forall X0.(l1\_rltopsp1\ X0)\Rightarrow((l1\_rlvect\_1\ X0)\wedge(l1\_pre\_topc\ X0)) \quad (7)$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0 \\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge \\ ((v5\_rlvect\_1\ X0)\wedge((v6\_rlvect\_1\ X0)\wedge((v7\_rlvect\_1\ X0)\wedge((v8\_rlvect\_1 \\ X0)\wedge(l1\_rlvect\_1\ X0))))))))))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0 \\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(m1\_subset\_1\ (k1\_rltopsp1 \\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((v5\_rltopsp1\ (k15\_euclid\ X0))\wedge (l1\_rltopsp1\ (k15\_euclid\ X0))) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X1. \\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(\forall X2.( \\ m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))))\Rightarrow \\ ((r1\_sppol\_1\ X0\ X1\ X2)\Leftrightarrow((X1\in X2)\wedge(\forall X3.(m1\_subset\_1\ X3\ ( \\ u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0 \\ (k15\_euclid\ X0)))\Rightarrow(\neg(X1\in k1\_rltopsp1\ (k15\_euclid\ X0)\ X3\ X4)\wedge( \\ (r1\_tarski\ (k1\_rltopsp1\ (k15\_euclid\ X0)\ X3\ X4)\ X2)\wedge((X1\neq X3)\wedge( \\ X1\neq X4)))))))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \quad (12)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \quad (13)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X1. \\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(\forall X2.( \\ m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(\forall X3.(m1\_subset\_1 \\ X3\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(\neg(r1\_sppol\_1\ X0\ X1\ (k1\_rltopsp1 \\ (k15\_euclid\ X0)\ X2\ X3))\wedge((X1\neq X2)\wedge(X1\neq X3)))))) \end{aligned}$$