

## t16\_sppol\_2

(TMTW2A4tmoXRmYDHeDmttxNrohVdLAzk8na)

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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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  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  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k2\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\ & X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow \\ & (r1\_tarski (k2\_topreal1 X0 X1 X2) (k3\_topreal1 X0 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers) \wedge (v7\_ordinal1 \\ & X1)) \Rightarrow (k2\_nat\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(m1\_subset\_1\ X1\ k5\_numbers))\Rightarrow (k1\_nat\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m2\_finseq\_1\ X1\ (u1\_struct\_0 \\ (k15\_euclid\ X0)))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(((r1\_xxreal\_0 \\ np\_1\ X2)\wedge(r1\_xxreal\_0\ (k1\_nat\_1\ X2\ np\_1)\ (k3\_finseq\_1\ X1)))\Rightarrow \\ (k2\_topreal1\ X0\ X1\ X2 = k1\_rltopsp1\ (k15\_euclid\ X0)\ (k7\_partfun1 \\ (u1\_struct\_0\ (k15\_euclid\ X0))\ X1\ X2)\ (k7\_partfun1\ (u1\_struct\_0 \\ (k15\_euclid\ X0))\ X1\ (k1\_nat\_1\ X2\ np\_1))))\wedge((\neg(r1\_xxreal\_0\ np\_1 \\ X2)\wedge(r1\_xxreal\_0\ (k1\_nat\_1\ X2\ np\_1)\ (k3\_finseq\_1\ X1)))\Rightarrow(k2\_topreal1 \\ X0\ X1\ X2 = k1\_xboole\_0)))))) \quad (7) \end{aligned}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \quad (8)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m2\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_2)))\Rightarrow \\ (\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(((r1\_xxreal\_0\ np\_1 \\ X1)\wedge(r1\_xxreal\_0\ (k2\_nat\_1\ X1\ np\_1)\ (k3\_finseq\_1\ X0)))\Rightarrow(r1\_tarski \\ (k1\_rltopsp1\ (k15\_euclid\ np\_2)\ (k7\_partfun1\ (u1\_struct\_0\ (k15\_euclid \\ np\_2))\ X0\ X1)\ (k7\_partfun1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))\ X0 \\ (k2\_nat\_1\ X1\ np\_1)))\ (k3\_topreal1\ np\_2\ X0)))))) \end{aligned}$$