

## l28\_sppol\_2

(TMLbi4zMvSgFyB5eUzsdByH3877CDLbNiGY)

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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  $v2\_topreal1 : \iota \Rightarrow o$  be given. Let  $k2\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k7\_topreal1 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k17\_euclid : \iota \Rightarrow \iota$  be given. Let  $k18\_euclid : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_finseq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge ((v1\_funct\_1 \\ & X2) \wedge (v1\_finseq\_1 X2))) \Rightarrow ((X2 = k10\_finseq\_1 X0 X1) \Leftrightarrow ((k3\_finseq\_1 \\ & X2 = np\_2) \wedge ((k1\_funct\_1 X2 np\_1 = X0) \wedge (k1\_funct\_1 X2 np\_2 = X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (k7\_topreal1 X0 = ReplSep (toset (\lambda X1 : \iota. m1\_subset\_1 X1 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))) (\lambda X1 : \iota. (r1\_xxreal\_0 (k17\_euclid \\ & X1) (k17\_euclid X0)) \wedge (k18\_euclid X1 = k18\_euclid X0)) (\lambda X1 : \\ & \iota. X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & ((r1\_xxreal\_0 (k3\_finseq\_1 X0) np\_2) \Rightarrow (v2\_topreal1 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$r1\_xxreal\_0 np\_2 np\_2 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X0) \wedge ((m1\_subset\_1 \\ & X1 X0) \wedge (m1\_subset\_1 X2 X0))) \Rightarrow (k2\_finseq\_4 X0 X1 X2 = k10\_finseq\_1 \\ & X1 X2) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1 (k10\_finseq\_1 X0 X1))\wedge(v1\_funct\_1 (k10\_finseq\_1 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow (\neg v1\_xboole\_0 (k7\_topreal1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1\_finseq\_1 (k10\_finseq\_1 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow (m1\_subset\_1 (k7\_topreal1 X0) (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((m1\_subset\_1 X1 X0)\wedge(m1\_subset\_1 X2 X0)))\Rightarrow(m2\_finseq\_1 (k2\_finseq\_4 X0 X1 X2) X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.k10\_finseq\_1 X0 X1 = k7\_finseq\_1 (k9\_finseq\_1 X0) (k9\_finseq\_1 X1) \quad (11)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(v1\_xboole\_0 X1)) \quad (12)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow (v2\_topreal1 (k2\_finseq\_4 (u1\_struct\_0 (k15\_euclid np\_2)) X0 X1)))$$