

t2\_sppol\_1 (TMW-  
tyJ3YthF6F2mYhMDzHjf7fVs5BQZsMgR)

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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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $np\_0 : \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Rightarrow ((r1\_xxreal\_0 k6\_numbers X0) \Rightarrow (X0 \in k5\_numbers)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (v2\_xxreal\_0 X0)) \Rightarrow (v2\_xxreal\_0 X1))) \quad (4)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((X0 \in k2\_finseq\_1 X1) \Leftrightarrow ((r1\_xxreal\_0 np\_1 X0) \wedge (r1\_xxreal\_0 X0 X1)))) \quad (5)$$

Assume the following.

$$((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (6)$$

Assume the following.

$$(m2\_subset\_1\ np\_0\ k1\_numbers\ k5\_numbers) \wedge ((m1\_subset\_1\ np\_0\ k5\_numbers) \wedge (m1\_subset\_1\ np\_0\ k1\_numbers)) \quad (7)$$

Assume the following.

$$v1\_xboole\_0\ np\_0 \quad (8)$$

Assume the following.

$$k4\_xcmplx\_0\ np\_0 = np\_0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ X0\ X1) \Leftrightarrow (m1\_subset\_1\ X2\ X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers) \wedge (v1\_xreal\_0\ X1)) \Rightarrow (k9\_real\_1\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1) \quad (11)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (12)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (13)$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1) \wedge (v3\_ordinal1\ k4\_ordinal1) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_int\_1\ X0) \wedge (v1\_int\_1\ X1)) \Rightarrow (v1\_int\_1\ (k6\_xcmplx\_0\ X0\ X1)) \quad (15)$$

Assume the following.

$$\forall X0.((\neg v3\_xxreal\_0\ X0) \wedge (v1\_xreal\_0\ X0)) \Rightarrow ((v1\_xcmplx\_0\ (k4\_xcmplx\_0\ X0)) \wedge (\neg v2\_xxreal\_0\ (k4\_xcmplx\_0\ X0))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ X0\ X1) \Rightarrow (m1\_subset\_1\ X2\ X0)) \quad (17)$$

Assume the following.

$$m1\_subset\_1 \ k5\_numbers \ (k1\_zfmisc\_1 \ k1\_numbers) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 \ X0)\wedge(v1\_xxreal\_0 \ X1))\Rightarrow( (r1\_xxreal\_0 \ X0 \ X1)\vee(r1\_xxreal\_0 \ X1 \ X0)) \quad (19)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ k4\_ordinal1)\Rightarrow(v7\_ordinal1 \ X0) \quad (20)$$

Assume the following.

$$\forall X0.((v1\_xxreal\_0 \ X0)\wedge(v3\_xxreal\_0 \ X0))\Rightarrow((\neg v1\_xboole\_0 \ X0)\wedge((v1\_xxreal\_0 \ X0)\wedge(\neg v2\_xxreal\_0 \ X0))) \quad (21)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 \ X0)\Rightarrow(v1\_xxreal\_0 \ X0) \quad (22)$$

Assume the following.

$$\forall X0.(v1\_int\_1 \ X0)\Rightarrow(v1\_xreal\_0 \ X0) \quad (23)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 \ X0)\Rightarrow(v1\_int\_1 \ X0) \quad (24)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ k1\_numbers)\Rightarrow(v1\_xreal\_0 \ X0) \quad (25)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 \ X0)\Rightarrow(\forall X1.(m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ X0))\Rightarrow(v1\_xboole\_0 \ X1)) \quad (26)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.(m2\_subset\_1 \ X0 \ k1\_numbers \ k5\_numbers)\Rightarrow(\forall X1. \\ &\quad (m2\_subset\_1 \ X1 \ k1\_numbers \ k5\_numbers)\Rightarrow(\forall X2.(m2\_subset\_1 \\ &\quad X2 \ k1\_numbers \ k5\_numbers)\Rightarrow(((r1\_xxreal\_0 \ np\_1 \ (k9\_real\_1 \ X0 \\ X1))\wedge(r1\_xxreal\_0 \ (k9\_real\_1 \ X0 \ X1) \ X2))\Rightarrow((k9\_real\_1 \ X0 \ X1 \in k2\_finseq\_1 \\ X2)\wedge(m2\_subset\_1 \ (k9\_real\_1 \ X0 \ X1) \ k1\_numbers \ k5\_numbers)))))) \end{aligned}$$