

t29\_sppol\_1  
(TMVr4UnYas5Etic4h6yQjvSbUbT6HkUchoJ)

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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  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $v1\_topreal1 : \iota \Rightarrow o$  be given. Let  $v3\_sppol\_1 : \iota \Rightarrow o$  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  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k17\_euclid : \iota \Rightarrow \iota$  be given. Let  $k18\_euclid : \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xreal\_0 X2) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Leftrightarrow (r1\_xxreal\_0 (k2\_xcmplx\_0 \\ & X0 X2) (k2\_xcmplx\_0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X2)) \Rightarrow \\ & (r1\_xxreal\_0 X0 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$r1\_xreal\_0 \ np\_1 \ np\_2 \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1\_xboole\_0 \ X0)\wedge((\neg v1\_xboole\_0 \ X1)\wedge \\ (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ X0))))\Rightarrow(\forall X2.(m2\_subset\_1 \\ X2 \ X0 \ X1)\Leftrightarrow(m1\_subset\_1 \ X2 \ X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 \ X1 \ X0)\Leftrightarrow(m1\_finseq\_1 \ X1 \ X0) \quad (7)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1\_subset\_1 \ X0 \ k5\_numbers)\wedge(v7\_ordinal1 \\ X1))\Rightarrow(k2\_nat\_1 \ X0 \ X1 = k2\_xcmplx\_0 \ X0 \ X1) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7\_ordinal1 \ X0)\wedge(m1\_subset\_1 \ X1 \ k5\_numbers))\Rightarrow \\ (k1\_nat\_1 \ X0 \ X1 = k2\_xcmplx\_0 \ X0 \ X1) \end{aligned} \quad (10)$$

Assume the following.

$$(\neg v1\_xboole\_0 \ k4\_ordinal1)\wedge(v3\_ordinal1 \ k4\_ordinal1) \quad (11)$$

Assume the following.

$$v6\_membered \ k4\_ordinal1 \quad (12)$$

Assume the following.

$$v3\_membered \ k1\_numbers \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1\_xboole\_0 \ X0)\wedge((\neg v1\_xboole\_0 \ X1)\wedge \\ (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ X0))))\Rightarrow(\forall X2.(m2\_subset\_1 \\ X2 \ X0 \ X1)\Rightarrow(m1\_subset\_1 \ X2 \ X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m2\_finseq\_1 \ X1 \ X0)\Rightarrow((v1\_funct\_1 \ X1)\wedge \\ (v1\_finseq\_1 \ X1)\wedge(m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \\ X0)))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1)) \quad (16)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (17)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(m2\_subset\_1 (k3\_finseq\_1 X0) k1\_numbers k5\_numbers) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers)\wedge(v7\_ordinal1 X1))\Rightarrow(m2\_subset\_1 (k2\_nat\_1 X0 X1) k1\_numbers k5\_numbers) \quad (19)$$

Assume the following.

$$\begin{aligned} &\forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow \\ &((v1\_topreal1 X0)\Leftrightarrow(\forall X1.(v7\_ordinal1 X1)\Rightarrow(\neg(r1\_xxreal\_0 \\ &np\_1 X1)\wedge((r1\_xxreal\_0 (k1\_nat\_1 X1 np\_1) (k3\_finseq\_1 X0))\wedge \\ &((k17\_euclid (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) X0 \\ &X1)\neq k17\_euclid (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) \\ &X0 (k1\_nat\_1 X1 np\_1)))\wedge(k18\_euclid (k7\_partfun1 (u1\_struct\_0 \\ &(k15\_euclid np\_2)) X0 X1)\neq k18\_euclid (k7\_partfun1 (u1\_struct\_0 \\ &(k15\_euclid np\_2)) X0 (k1\_nat\_1 X1 np\_1)))))))) \quad (20) \end{aligned}$$

Assume the following.

$$\begin{aligned} &\forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow \\ &((v3\_sppol\_1 X0)\Leftrightarrow(\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers)\Rightarrow \\ &(((r1\_xxreal\_0 np\_1 X1)\wedge(r1\_xxreal\_0 (k2\_nat\_1 X1 np\_2) (k3\_finseq\_1 \\ &X0)))\Rightarrow((k17\_euclid (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) \\ &X0 X1)\neq k17\_euclid (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) \\ &X0 (k2\_nat\_1 X1 np\_2)))\wedge(k18\_euclid (k7\_partfun1 (u1\_struct\_0 \\ &(k15\_euclid np\_2)) X0 X1)\neq k18\_euclid (k7\_partfun1 (u1\_struct\_0 \\ &(k15\_euclid np\_2)) X0 (k2\_nat\_1 X1 np\_2)))))) \quad (21) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers)\wedge(v7\_ordinal1 X1))\Rightarrow(k2\_nat\_1 X0 X1 = k2\_nat\_1 X1 X0) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0)\wedge(m1\_subset\_1 X1 k5\_numbers))\Rightarrow(k1\_nat\_1 X0 X1 = k1\_nat\_1 X1 X0) \quad (23)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (24)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(v1\_xxreal\_0 X0) \quad (25)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xreal\_0 X0) \quad (26)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(v1\_xboole\_0 X1)) \quad (27)$$

Assume the following.

$$\forall X0.(v6\_membered X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow(v7\_ordinal1 X1)) \quad (28)$$

Assume the following.

$$\forall X0.(v3\_membered X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow(v1\_xreal\_0 X1)) \quad (29)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers)\Rightarrow(\forall X1. \\ & (m2\_finseq\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow(\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow(\forall X3. \\ & (m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow(\forall X4. \\ & (m1\_subset\_1 X4 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow(\neg(v1\_topreal1 \\ & X1)\wedge((v3\_sppol\_1 X1)\wedge((r1\_xxreal\_0 np\_1 X0)\wedge((r1\_xxreal\_0 \\ & (k2\_nat\_1 X0 np\_2) (k3\_finseq\_1 X1))\wedge((X2 = k7\_partfun1 (u1\_struct\_0 \\ & (k15\_euclid np\_2)) X1 X0)\wedge((X3 = k7\_partfun1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)) X1 (k2\_nat\_1 X0 np\_1))\wedge((X4 = k7\_partfun1 (u1\_struct\_0 \\ & (k15\_euclid np\_2)) X1 (k2\_nat\_1 X0 np\_2))\wedge((\neg(k17\_euclid X2 = \\ & k17\_euclid X3)\wedge(k17\_euclid X4\neq k17\_euclid X3))\wedge(\neg(k18\_euclid \\ & X2 = k18\_euclid X3)\wedge(k18\_euclid X4\neq k18\_euclid X3))))))))))))) \end{aligned}$$