

# t59\_sppol\_2 (TMNLZCXSAC- fyvW2jo3eSKzKnaiWBqb8yHCa)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  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  $v1\_topreal4 : \iota \Rightarrow o$  be given. Let  $r1\_topreal4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_sppol\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $k5\_numbers : \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k3\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_topreal1 : \iota \Rightarrow o$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)))) \Rightarrow ((v1\_topreal4 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))) \Rightarrow (((X1 \in X0) \wedge (X2 \in X0)) \Rightarrow ((X1 = X2) \vee (r1\_sppol\_2 \\ & X1 X2 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \tag{2}$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \tag{4}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{5}$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(m1\_finseq\_1\ X1\ (u1\_struct\_0 \\ (k15\_euclid\ X0))))\Rightarrow(m1\_subset\_1\ (k3\_topreal1\ X0\ X1)\ (k1\_zfmisc\_1 \\ (u1\_struct\_0\ (k15\_euclid\ X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid \\ np\_2))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid \\ np\_2))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid \\ np\_2))))\Rightarrow((r1\_topreal4\ X0\ X1\ X2)\Leftrightarrow(\exists X3.(m2\_finseq\_1\ X3 \\ (u1\_struct\_0\ (k15\_euclid\ np\_2))))\wedge((v4\_topreal1\ X3)\wedge((X0 = k3\_topreal1 \\ np\_2\ X3)\wedge((X1 = k7\_partfun1\ (u1\_struct\_0\ (k15\_euclid\ np\_2)) \\ X3\ np\_1)\wedge(X2 = k7\_partfun1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))\ X3 \\ (k3\_finseq\_1\ X3)))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_2)))\Rightarrow \\ (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ np\_2)))\Rightarrow \\ (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid \\ np\_2))))\Rightarrow((r1\_sppol\_2\ X0\ X1\ X2)\Leftrightarrow((X0\neq X1)\wedge(\exists X3.((v4\_topreal1 \\ X3)\wedge(m2\_finseq\_1\ X3\ (u1\_struct\_0\ (k15\_euclid\ np\_2))))\wedge(\exists X4. \\ ((v4\_topreal1\ X4)\wedge(m2\_finseq\_1\ X4\ (u1\_struct\_0\ (k15\_euclid\ np\_2))))\wedge \\ ((X0 = k7\_partfun1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))\ X3\ np\_1)\wedge \\ ((X0 = k7\_partfun1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))\ X4\ np\_1)\wedge \\ ((X1 = k7\_partfun1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))\ X3\ (k3\_finseq\_1 \\ X3))\wedge((X1 = k7\_partfun1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))\ X4\ (k3\_finseq\_1 \\ X4))\wedge((k9\_subset\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))\ (k3\_topreal1 \\ np\_2\ X3)\ (k3\_topreal1\ np\_2\ X4) = k2\_tarski\ X0\ X1)\wedge(X2 = k4\_subset\_1 \\ (u1\_struct\_0\ (k15\_euclid\ np\_2))\ (k3\_topreal1\ np\_2\ X3)\ (k3\_topreal1 \\ np\_2\ X4)))))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v7\_ordinal1\ X1)) \quad (10)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)))) \Rightarrow ((v1\_topreal4 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow \\ & (\forall X4.(m1\_subset\_1 X4 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)))) \Rightarrow (\neg(r1\_topreal4 X3 X1 X2) \wedge ((r1\_topreal4 X4 X1 X2) \wedge (( \\ & k9\_subset\_1 (u1\_struct\_0 (k15\_euclid np\_2)) X3 X4 = k2\_tarski \\ & X1 X2) \wedge (X0 = k4\_subset\_1 (u1\_struct\_0 (k15\_euclid np\_2)) X3 X4)))))))))) \end{aligned}$$