

t30\_sppol\_1  
(TMWHt1bCdrvzGKiu1knGyGLj6kWNpgydgVc)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  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. Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\
& (m2\_finseq\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (\forall X2. \\
& (m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (\forall X3. \\
& (m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (\forall X4. \\
& (m1\_subset\_1 X4 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow (\neg(v1\_topreal1 \\
& X1) \wedge ((v3\_sppol\_1 X1) \wedge ((r1\_xxreal\_0 np\_1 X0) \wedge ((r1\_xxreal\_0 \\
& (k2\_nat\_1 X0 np\_2) (k3\_finseq\_1 X1)) \wedge ((X2 = k7\_partfun1 (u1\_struct\_0 \\
& (k15\_euclid np\_2)) X1 X0) \wedge ((X3 = k7\_partfun1 (u1\_struct\_0 (k15\_euclid \\
& np\_2)) X1 (k2\_nat\_1 X0 np\_1)) \wedge ((X4 = k7\_partfun1 (u1\_struct\_0 \\
& (k15\_euclid np\_2)) X1 (k2\_nat\_1 X0 np\_2)) \wedge ((\neg(k17\_euclid X2 = \\
& k17\_euclid X3) \wedge (k17\_euclid X4 \neq k17\_euclid X3)) \wedge (\neg(k18\_euclid \\
& X2 = k18\_euclid X3) \wedge (k18\_euclid X4 \neq k18\_euclid X3))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\
& (m2\_finseq\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (((v1\_topreal1 \\
& X1) \wedge ((v3\_sppol\_1 X1) \wedge ((r1\_xxreal\_0 np\_1 X0) \wedge ((r1\_xxreal\_0 \\
& (k2\_nat\_1 X0 np\_2) (k3\_finseq\_1 X1)) \wedge (k18\_euclid (k7\_partfun1 \\
& (u1\_struct\_0 (k15\_euclid np\_2)) X1 X0) = k18\_euclid (k7\_partfun1 \\
& (u1\_struct\_0 (k15\_euclid np\_2)) X1 (k2\_nat\_1 X0 np\_1)))))) \Rightarrow \\
& (k17\_euclid (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) X1 \\
& (k2\_nat\_1 X0 np\_1)) = k17\_euclid (k7\_partfun1 (u1\_struct\_0 (k15\_euclid \\
& np\_2)) X1 (k2\_nat\_1 X0 np\_2))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\
& (m2\_finseq\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (((v1\_topreal1 \\
& X1) \wedge ((v3\_sppol\_1 X1) \wedge ((r1\_xxreal\_0 np\_1 X0) \wedge ((r1\_xxreal\_0 \\
& (k2\_nat\_1 X0 np\_2) (k3\_finseq\_1 X1)) \wedge (k17\_euclid (k7\_partfun1 \\
& (u1\_struct\_0 (k15\_euclid np\_2)) X1 X0) = k17\_euclid (k7\_partfun1 \\
& (u1\_struct\_0 (k15\_euclid np\_2)) X1 (k2\_nat\_1 X0 np\_1)))))) \Rightarrow \\
& (k18\_euclid (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) X1 \\
& (k2\_nat\_1 X0 np\_1)) = k18\_euclid (k7\_partfun1 (u1\_struct\_0 (k15\_euclid \\
& np\_2)) X1 (k2\_nat\_1 X0 np\_2))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& ((v3\_sppol\_1 X0) \Leftrightarrow (\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow \\
& ((r1\_xxreal\_0 np\_1 X1) \wedge (r1\_xxreal\_0 (k2\_nat\_1 X1 np\_2) (k3\_finseq\_1 \\
& X0)))) \Rightarrow ((k17\_euclid (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) \\
& X0 X1) \neq k17\_euclid (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) \\
& X0 (k2\_nat\_1 X1 np\_2))) \wedge (k18\_euclid (k7\_partfun1 (u1\_struct\_0 \\
& (k15\_euclid np\_2)) X0 X1) \neq k18\_euclid (k7\_partfun1 (u1\_struct\_0 \\
& (k15\_euclid np\_2)) X0 (k2\_nat\_1 X1 np\_2))))))
\end{aligned} \tag{4}$$

### Theorem 1

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