

t84\_sprect\_1 (TM-  
bVVbf2FWz7srVBV8WdS6teRfavZzREaQ7)

October 27, 2020

Let  $v1\_sprect\_1 : \iota \Rightarrow o$  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  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k21\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k22\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_compts\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_sprect\_1 : \iota \Rightarrow \iota$  be given. Let  $k12\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_sppol\_1 : \iota \Rightarrow o$  be given. Let  $v2\_sppol\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v1\_xboole\_0 X0) \wedge ((v2\_compts\_1 X0 (k15\_euclid np\_2)) \wedge \\ &(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ &(k22\_pscomp\_1 (k3\_topreal1 np\_2 (k1\_sprect\_1 X0)) = k12\_pscomp\_1 \\ &X0) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v1\_xboole\_0 X0) \wedge ((v2\_compts\_1 X0 (k15\_euclid np\_2)) \wedge \\ &(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ &(k21\_pscomp\_1 (k3\_topreal1 np\_2 (k1\_sprect\_1 X0)) = k12\_pscomp\_1 \\ &X0) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ np\_2)))) \Rightarrow (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_sprect\_1 \\ X0) np\_2 = k12\_pscomp\_1 X0) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ ((v1\_sprect\_1 X0) \Leftrightarrow (\exists X1. ((\neg v1\_xboole\_0 X1) \wedge ((v2\_compts\_1 \\ X1 (k15\_euclid np\_2)) \wedge ((\neg v1\_sppol\_1 X1) \wedge ((\neg v2\_sppol\_1 X1) \wedge \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))))))) \wedge \\ (X0 = k1\_sprect\_1 X1)) \end{aligned} \quad (4)$$

**Theorem 1**

$$\forall X0.((v1\_sprect\_1 X0) \wedge (m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow ((k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) X0 np\_2 = k21\_pscomp\_1 (k3\_topreal1 np\_2 X0)) \wedge (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) X0 np\_2 = k22\_pscomp\_1 (k3\_topreal1 np\_2 X0)))$$