

t50\_sprect\_3 (TM-  
RYM8pWcCPQqFwfEQUdGQZxTMdTJMbwKez)

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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  $r1\_sprect\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_matrix\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  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  $k5\_numbers : \iota$  be given. Let  $np\_0 : \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X3.(m1\_subset\_1 X3 k1\_numbers) \Rightarrow (((r1\_xxreal\_0 k1\_xboole\_0 \\ & X3) \wedge ((r1\_xxreal\_0 X3 np\_1) \wedge (r1\_sprect\_2 X0 (k2\_finseq\_4 (u1\_struct\_0 \\ & (k15\_euclid np\_2)) X1 X2)))) \Rightarrow (r1\_sprect\_2 X0 (k4\_matrix\_2 (u1\_struct\_0 \\ & (k15\_euclid np\_2)) (k3\_rlvect\_1 (k15\_euclid np\_2) (k1\_rlvect\_1 \\ & (k15\_euclid np\_2) X1 (k9\_real\_1 np\_1 X3)) (k1\_rlvect\_1 (k15\_euclid \\ & np\_2) X2 X3)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0 \\ (k15\_euclid\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ ( \\ k15\_euclid\ X0))) \Rightarrow (\forall X3.(v1\_xreal\_0\ X3) \Rightarrow (k1\_rlvect\_1\ ( \\ k15\_euclid\ X0)\ (k3\_rlvect\_1\ (k15\_euclid\ X0)\ X1\ X2)\ X3 = k3\_rlvect\_1 \\ (k15\_euclid\ X0)\ (k1\_rlvect\_1\ (k15\_euclid\ X0)\ X1\ X3)\ (k1\_rlvect\_1 \\ (k15\_euclid\ X0)\ X2\ X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0\ np\_2) \wedge (m2\_subset\_1\ np\_2\ k1\_numbers\ k5\_numbers)) \wedge \\ ((m1\_subset\_1\ np\_2\ k5\_numbers) \wedge (m1\_subset\_1\ np\_2\ k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0\ np\_1) \wedge (m2\_subset\_1\ np\_1\ k1\_numbers\ k5\_numbers)) \wedge \\ ((m1\_subset\_1\ np\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_1\ k1\_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$v1\_xboole\_0\ np\_0 \quad (6)$$

Assume the following.

$$k6\_xcmplx\_0\ np\_1\ (k7\_xcmplx\_0\ np\_1\ np\_2) = k7\_xcmplx\_0\ np\_1\ np\_2 \quad (7)$$

Assume the following.

$$r1\_xxreal\_0\ (k7\_xcmplx\_0\ np\_1\ np\_2)\ np\_1 \quad (8)$$

Assume the following.

$$r1\_xxreal\_0\ np\_0\ (k7\_xcmplx\_0\ np\_1\ np\_2) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers) \wedge (v1\_xreal\_0\ X1)) \Rightarrow (k9\_real\_1\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1) \quad (10)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers) \wedge (v1\_xreal\_0\ X1)) \Rightarrow (k10\_real\_1\ X0\ X1 = k7\_xcmplx\_0\ X0\ X1) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0) \wedge (v1\_xreal\_0\ X1)) \Rightarrow (v1\_xreal\_0\ (k7\_xcmplx\_0\ X0\ X1)) \quad (13)$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(m1\_subset\_1\ (k9\_real\_1\ X0\ X1)\ k1\_numbers) \quad (15)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \quad (16)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v7\_ordinal1\ X1)) \quad (17)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_2)))\Rightarrow \\ & (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ np\_2)))\Rightarrow \\ & (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid\ np\_2)))\Rightarrow \\ & ((r1\_sprect\_2\ X0\ (k2\_finseq\_4\ (u1\_struct\_0\ (k15\_euclid\ np\_2)) \\ & X1\ X2))\Rightarrow(r1\_sprect\_2\ X0\ (k4\_matrix\_2\ (u1\_struct\_0\ (k15\_euclid \\ & np\_2))\ (k1\_rlvect\_1\ (k15\_euclid\ np\_2)\ (k3\_rlvect\_1\ (k15\_euclid \\ & np\_2)\ X1\ X2)\ (k10\_real\_1\ np\_1\ np\_2)))))) \end{aligned}$$