

t4\_sprect\_5 (TMZfFa-  
fUiBCb9sVoi7mDRNy6HWXgVpCD28M)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_finseq\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k2\_rfinseq : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_finseq\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ & X1)))) \Rightarrow (\forall X2.(X2 \in k10\_xtuple\_0 X0) \Rightarrow (k4\_finseq\_4 (k7\_finseq\_1 \\ & X0 X1) X2 = k4\_finseq\_4 X0 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 X1) \Rightarrow (\forall X3.(m2\_finseq\_1 X3 X1) \Rightarrow (((X0 \in k10\_xtuple\_0 X3) \wedge \\ & ((X2 \in k10\_xtuple\_0 X3) \wedge (r1\_xxreal\_0 (k4\_finseq\_4 X3 X2) (k4\_finseq\_4 \\ & X3 X0)))) \Rightarrow (X0 \in k10\_xtuple\_0 (k2\_finseq\_5 X1 X3 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m2\_finseq\_1 X1 X0) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 X0) \Rightarrow (\forall X3.(m1\_subset\_1 X3 X0) \Rightarrow \\ & (((X2 \in k10\_xtuple\_0 X1) \wedge ((X3 \in k10\_xtuple\_0 X1) \wedge (r1\_xxreal\_0 \\ & (k4\_finseq\_4 X1 X2) (k4\_finseq\_4 X1 X3)))) \Rightarrow (k4\_finseq\_4 (k2\_finseq\_5 \\ & X0 X1 X2) X3 = k2\_xcmplx\_0 (k6\_xcmplx\_0 (k4\_finseq\_4 X1 X3) (k4\_finseq\_4 \\ & X1 X2)) np\_1)))))) \end{aligned} \quad (3)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 \ X1 \ X0) \Leftrightarrow (m1\_finseq\_1 \ X1 \ X0) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1\_finseq\_1 \ X1 \ X0) \wedge (m1\_finseq\_1 \ X2 \ X0)) \Rightarrow (k8\_finseq\_1 \ X0 \ X1 \ X2 = k7\_finseq\_1 \ X1 \ X2) \quad (6)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_finseq\_1 \ X1 \ X0) \Rightarrow ((v1\_relat\_1 \ X1) \wedge (v1\_funct\_1 \ X1) \wedge (v1\_finseq\_1 \ X1)) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v7\_ordinal1 \ X1) \wedge (m1\_finseq\_1 \ X2 \ X0)) \Rightarrow (m2\_finseq\_1 \ (k2\_rfinseq \ X0 \ X1 \ X2) \ X0) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 \ X0) \wedge ((m1\_finseq\_1 \\ & X1 \ X0) \wedge (m1\_subset\_1 \ X2 \ X0))) \Rightarrow (m2\_finseq\_1 \ (k2\_finseq\_5 \ X0 \ X1 \ X2) \\ & X0) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 \ X0) \wedge (m1\_finseq\_1 \ X1 \ X0)) \Rightarrow (m2\_finseq\_1 \ (k1\_finseq\_5 \ X0 \ X1 \ X2) \ X0) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 \ X0) \Rightarrow (\forall X1. (m2\_finseq\_1 \ X1 \ X0) \Rightarrow \\ & (\forall X2. (m1\_subset\_1 \ X2 \ X0) \Rightarrow (((X2 \in k10\_xtuple\_0 \ X1) \Rightarrow (k1\_finseq\_6 \\ & X0 \ X1 \ X2 = k8\_finseq\_1 \ X0 \ (k2\_finseq\_5 \ X0 \ X1 \ X2) \ (k2\_rfinseq \ X0 \ np\_1 \\ & (k1\_finseq\_5 \ X0 \ X1 \ X2)))) \wedge ((\neg X2 \in k10\_xtuple\_0 \ X1) \Rightarrow (k1\_finseq\_6 \\ & X0 \ X1 \ X2 = X1)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k4\_ordinal1) \Rightarrow (v7\_ordinal1 \ X0) \quad (13)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m2\_finseq\_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1\_subset\_1 X2 X0) \Rightarrow (\forall X3. (m1\_subset\_1 X3 X0) \Rightarrow \\ & (((X2 \in k10\_xtuple\_0 X1) \wedge ((X3 \in k10\_xtuple\_0 X1) \wedge (r1\_xxreal\_0 \\ & (k4\_finseq\_4 X1 X2) (k4\_finseq\_4 X1 X3)))))) \Rightarrow (k4\_finseq\_4 (k1\_finseq\_6 \\ & X0 X1 X2) X3 = k2\_xcmplx\_0 (k6\_xcmplx\_0 (k4\_finseq\_4 X1 X3) (k4\_finseq\_4 \\ & X1 X2)) np\_1)))))) \end{aligned}$$