

t1\_sprect\_3  
(TMcN7CA7H8rvrR2KVShQVm8aVjw4w1D8Q7h)

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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  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  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  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k6\_numbers : \iota$  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  $np\_0 : \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ X1)))) \Rightarrow (k3\_finseq\_1 (k7\_finseq\_1 X0 X1) = k2\_nat\_1 (k3\_finseq\_1 \\ X0) (k3\_finseq\_1 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow ((\neg r1\_xxreal\_0 np\_1 X0) \Rightarrow (X0 = k6\_numbers)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m2\_finseq\_1 X1 X0) \Rightarrow \\ (\forall X2.(m2\_finseq\_1 X2 X0) \Rightarrow (\forall X3.(m2\_subset\_1 X3 k1\_numbers \\ k5\_numbers) \Rightarrow (((r1\_xxreal\_0 np\_1 X3) \wedge (r1\_xxreal\_0 X3 (k3\_finseq\_1 \\ X2)))) \Rightarrow (k7\_partfun1 X0 (k8\_finseq\_1 X0 X1 X2) (k2\_nat\_1 X3 (k3\_finseq\_1 \\ X1)) = k7\_partfun1 X0 X2 X3)))))) \end{aligned} \quad (4)$$

Assume the following.

$$v1\_xboole\_0 \text{ np\_}0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0)\wedge(v1\_xxreal\_0 X1))\Rightarrow(r1\_xxreal\_0 X0 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Leftrightarrow(m1\_finseq\_1 X1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_finseq\_1 X1 X0)\wedge(m1\_finseq\_1 X2 X0))\Rightarrow(k8\_finseq\_1 X0 X1 X2 = k7\_finseq\_1 X1 X2) \quad (9)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (10)$$

Assume the following.

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

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(k3\_finseq\_1 X0 = k1\_card\_1 X0) \quad (12)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (13)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow((\neg v1\_xboole\_0 (k1\_card\_1 X0))\wedge(v1\_card\_1 (k1\_card\_1 X0))) \quad (14)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Rightarrow((v1\_funct\_1 X1)\wedge((v1\_finseq\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1)) \quad (17)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (18)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(m2\_subset\_1 (k3\_finseq\_1 X0) k1\_numbers k5\_numbers) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers)\wedge(v7\_ordinal1 X1))\Rightarrow(k2\_nat\_1 X0 X1 = k2\_nat\_1 X1 X0) \quad (20)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(v1\_xxreal\_0 X0) \quad (22)$$

**Theorem 1**

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0 X1)\wedge(m2\_finseq\_1 X1 X0))\Rightarrow(\forall X2.(m2\_finseq\_1 X2 X0)\Rightarrow(k7\_partfun1 X0 (k8\_finseq\_1 X0 X2 X1) (k3\_finseq\_1 (k8\_finseq\_1 X0 X2 X1)) = k7\_partfun1 X0 X1 (k3\_finseq\_1 X1))))$$