

t7\_extreal1  
(TMG5ReE5tcVhadjHX2Q2pW6qif8aay7jorj)

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Let  $k4\_extreal1 : \iota \Rightarrow \iota$  be given. Let  $k6\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_numbers : \iota$  be given. Let  $k1\_supinf\_2 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  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  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k12\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

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

Assume the following.

$$k1\_card\_1 k1\_xboole\_0 = k1\_xboole\_0 \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (3)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (4)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k3\_finseq\_1 X0 = k1\_card\_1 X0) \quad (5)$$

Assume the following.

$$k1\_supinf\_2 = k1\_xboole\_0 \quad (6)$$

Assume the following.

$$\forall X0.\exists X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\wedge(v1\_xboole\_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Rightarrow((v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))) \quad (8)$$

Assume the following.

$$\forall X0.m2\_finseq\_1 (k6\_finseq\_1 X0) X0 \quad (9)$$

Assume the following.

$$\forall X0.(m1\_finseq\_1 X0 k7\_numbers)\Rightarrow(m1\_subset\_1 (k4\_extreal1 X0) k7\_numbers) \quad (10)$$

Assume the following.

$$\forall X0.k6\_finseq\_1 X0 = k1\_xboole\_0 \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(m2\_finseq\_1 X0 k7\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 \\ X1 k7\_numbers)\Rightarrow((X1 = k4\_extreal1 X0)\Leftrightarrow(\exists X2.((v1\_funct\_1 \\ X2)\wedge((v1\_funct\_2 X2 k5\_numbers k7\_numbers)\wedge(m1\_subset\_1 X2 ( \\ k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k7\_numbers))))\wedge((X1 = k12\_supinf\_2 \\ X2 (k3\_finseq\_1 X0))\wedge((k12\_supinf\_2 X2 k6\_numbers = k1\_supinf\_2)\wedge \\ (\forall X3.(m2\_subset\_1 X3 k1\_numbers k5\_numbers)\Rightarrow((\neg v1\_xreal\_0 \\ (k3\_finseq\_1 X0) X3)\Rightarrow(k12\_supinf\_2 X2 (k2\_nat\_1 X3 np\_1) = k3\_supinf\_2 \\ (k12\_supinf\_2 X2 X3) (k12\_supinf\_2 X0 (k2\_nat\_1 X3 np\_1)))))))))) \quad (12) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (13)$$

**Theorem 1**  $k4\_extreal1 (k6\_finseq\_1 k7\_numbers) = k1\_supinf\_2.$