

## t107\_seq\_4

(TMQvodPFr88ATSq3v1XuSTP669JHiFDHUDa)

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k14\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $v1\_seq\_4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k15\_seq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_numbers : \iota$  be given. Let  $k22\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1\_xboole\_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 X0) \Rightarrow (\forall X1. (v1\_xreal\_0 X1) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (v2\_xxreal\_0 X0)) \Rightarrow (v2\_xxreal\_0 X1))) \quad (3)$$

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \quad (4)$$

Assume the following.

$$((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2 X1 X0)\Rightarrow(\forall X2.(m2\_finseq\_2 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (7)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (8)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (9)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (10)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (11)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1\_subset\_1 X0 k5\_numbers)\wedge \\ & ((m1\_subset\_1 X1 (k14\_seq\_4 X0))\wedge(m1\_subset\_1 X2 (k14\_seq\_4 X0))))\Rightarrow \\ & (m2\_finseq\_2 (k15\_seq\_4 X0 X1 X2) k2\_numbers (k14\_seq\_4 X0)) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_numbers)\Rightarrow(m1\_finseq\_2 (k14\_seq\_4 X0) k2\_numbers) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers)\Rightarrow(\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k14\_seq\_4 X0)))\Rightarrow((v1\_seq\_4 X1 X0)\Leftrightarrow \\ & (\forall X2.(m2\_finseq\_2 X2 k2\_numbers (k14\_seq\_4 X0))\Rightarrow(\neg(X2 \in \\ & X1)\wedge(\forall X3.(m1\_subset\_1 X3 k1\_numbers)\Rightarrow(\neg(\neg r1\_xxreal\_0 \\ & X3 k6\_numbers)\wedge(\forall X4.(m2\_finseq\_2 X4 k2\_numbers (k14\_seq\_4 \\ & X0))\Rightarrow((\neg r1\_xxreal\_0 X3 (k22\_seq\_4 X4))\Rightarrow(k15\_seq\_4 X0 X2 X4 \in X1)))))))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_numbers))\Rightarrow(v3\_membered X0) \quad (16)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(v1\_xxreal\_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.((v1\_xreal\_0 X0) \wedge (v2\_xreal\_0 X0)) \Rightarrow ((\neg v1\_xboole\_0 X0) \wedge ((v1\_xreal\_0 X0) \wedge (\neg v3\_xreal\_0 X0))) \quad (18)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (19)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (20)$$

Assume the following.

$$\forall X0.(v3\_membered X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v1\_xreal\_0 X1)) \quad (21)$$

**Theorem 1**

$$\forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k14\_seq\_4 X0))) \Rightarrow ((X1 = k14\_seq\_4 X0) \Rightarrow (v1\_seq\_4 X1 X0)))$$