

t103\_seq\_4  
(TMcMkGNGniVaGF4yk468YosdkKt2J2k7og4)

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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  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_numbers : \iota$  be given. Let  $k14\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $r1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k22\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $k19\_seq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k17\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $np\_0 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  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  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k5\_complex1 : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m2\_finseq\_2 X1 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (r1\_xreal\_0 k6\_numbers \\ & (k22\_seq\_4 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m2\_finseq\_2 X1 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow ((k22\_seq\_4 X1 = k6\_numbers) \Rightarrow \\ & (X1 = k17\_seq\_4 X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m2\_finseq\_2 X1 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (\forall X2.(m2\_finseq\_2 \\ & X2 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow ((k19\_seq\_4 X0 X1 X2 = k17\_seq\_4 X0) \Rightarrow \\ & (X1 = X2)))) \end{aligned} \tag{3}$$

Assume the following.

$$(m2\_subset\_1 np\_0 k1\_numbers k5\_numbers) \wedge ((m1\_subset\_1 np\_0 k5\_numbers) \wedge (m1\_subset\_1 np\_0 k1\_numbers)) \tag{4}$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_1 \ (k4\_xcmplx\_0 \ np\_1) = np\_0 \quad (5)$$

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.

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

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (9)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (10)$$

Assume the following.

$$k5\_complex1 = k1\_xboole\_0 \quad (11)$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 \ X0) \Rightarrow (\forall X1. (v1\_xreal\_0 \ X1) \Rightarrow (((r1\_xxreal\_0 \ X0 \ X1) \wedge (r1\_xxreal\_0 \ X1 \ X0)) \Rightarrow (X0 = X1))) \quad (12)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_1 \ (k4\_xcmplx\_0 \ np\_1) = k6\_numbers \quad (13)$$

Assume the following.

$$(\neg v1\_xboole\_0 \ k4\_ordinal1) \wedge (v3\_ordinal1 \ k4\_ordinal1) \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_finseq\_2 \ X1 \ X0) \Rightarrow (\forall X2. (m2\_finseq\_2 \ X2 \ X0 \ X1) \Rightarrow (m2\_finseq\_1 \ X2 \ X0)) \quad (15)$$

Assume the following.

$$m1\_subset\_1 \ k5\_numbers \ (k1\_zfmisc\_1 \ k1\_numbers) \quad (16)$$

Assume the following.

$$\forall X0.(m1\_finseq\_1 X0 k2\_numbers) \Rightarrow (m1\_subset\_1 (k22\_seq\_4 X0) k1\_numbers) \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1\_subset\_1 X0 k5\_numbers) \wedge \\ & ((m1\_subset\_1 X1 (k14\_seq\_4 X0)) \wedge (m1\_subset\_1 X2 (k14\_seq\_4 X0)))) \Rightarrow \\ & (m2\_finseq\_2 (k19\_seq\_4 X0 X1 X2) k2\_numbers (k14\_seq\_4 X0)) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (m1\_finseq\_2 (k14\_seq\_4 X0) k2\_numbers) \quad (19)$$

Assume the following.

$$k1\_xboole\_0 = the (\lambda X0 : \iota.v1\_xboole\_0 X0) \quad (20)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (22)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m2\_finseq\_2 X1 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (\forall X2.(m2\_finseq\_2 \\ & X2 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (\neg(X1 \neq X2) \wedge (r1\_xreal\_0 (k22\_seq\_4 \\ & (k19\_seq\_4 X0 X1 X2)) k6\_numbers)))) \end{aligned}$$