

t76\_seq\_4 (TMR-  
FWc1DoPcxHL4WHiuU5sBB6yuo1LwSDvB)

October 27, 2020

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  $k15\_seq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_seq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_seq\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m2\_finseq\_2 X1 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (\forall X2.(m2\_finseq\_2 \\ & X2 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (\forall X3.(m2\_finseq\_2 X3 k2\_numbers \\ & (k14\_seq\_4 X0)) \Rightarrow (k19\_seq\_4 X0 (k19\_seq\_4 X0 X1 X2) X3 = k19\_seq\_4 \\ & X0 X1 (k15\_seq\_4 X0 X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m2\_finseq\_2 X1 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (\forall X2.(m2\_finseq\_2 \\ & X2 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (k18\_seq\_4 X0 (k19\_seq\_4 X0 X1 X2) = \\ & k15\_seq\_4 X0 (k18\_seq\_4 X0 X1) X2))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m2\_finseq\_2 X1 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (\forall X2.(m2\_finseq\_2 \\ & X2 k2\_numbers (k14\_seq\_4 X0)) \Rightarrow (k19\_seq\_4 X0 X1 (k18\_seq\_4 X0 X2) = \\ & k15\_seq\_4 X0 X1 X2))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\ & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2 X1 X0)\Rightarrow(\forall X2.(m2\_finseq\_2 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (5)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (6)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (7)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1\_subset\_1 X0 k5\_numbers)\wedge \\ & ((m1\_subset\_1 X1 (k14\_seq\_4 X0))\wedge(m1\_subset\_1 X2 (k14\_seq\_4 X0))))\Rightarrow \\ & (m2\_finseq\_2 (k19\_seq\_4 X0 X1 X2) k2\_numbers (k14\_seq\_4 X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers)\wedge(m1\_subset\_1 \\ & X1 (k14\_seq\_4 X0)))\Rightarrow(m2\_finseq\_2 (k18\_seq\_4 X0 X1) k2\_numbers \\ & (k14\_seq\_4 X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_numbers)\Rightarrow(m1\_finseq\_2 (k14\_seq\_4 X0) k2\_numbers) \quad (11)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(v1\_xboole\_0 X1)) \quad (12)$$

### Theorem 1

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers)\Rightarrow(\forall X1. \\ & (m2\_finseq\_2 X1 k2\_numbers (k14\_seq\_4 X0))\Rightarrow(\forall X2.(m2\_finseq\_2 \\ & X2 k2\_numbers (k14\_seq\_4 X0))\Rightarrow(\forall X3.(m2\_finseq\_2 X3 k2\_numbers \\ & (k14\_seq\_4 X0))\Rightarrow(k15\_seq\_4 X0 X1 (k19\_seq\_4 X0 X2 X3) = k19\_seq\_4 \\ & X0 (k15\_seq\_4 X0 X1 X2) X3)))) \end{aligned}$$