

## t32\_idea\_1

(TMbtT2fPB2PfSjFLk2P1nc8NKs8gaWcsYxJ)

October 27, 2020

Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_4 : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k13\_idea\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  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  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_recdef\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k15\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1 X1 (k1\_zfmisc\_1 X2)) \wedge (v1\_xboole\_0 X2)) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2.(v1\_xxreal\_0 X2) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X2)) \Rightarrow (r1\_xxreal\_0 X0 X2)))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((X0 \in k2\_finseq\_1 X1) \Leftrightarrow ((r1\_xxreal\_0 np\_1 X0) \wedge (r1\_xxreal\_0 X0 X1)))) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \text{ np\_4}) \wedge (m2\_subset\_1 \text{ np\_4 } k1\_numbers \text{ k5\_numbers})) \wedge \\ & ((m1\_subset\_1 \text{ np\_4 } k5\_numbers) \wedge (m1\_subset\_1 \text{ np\_4 } k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \text{ np\_3}) \wedge (m2\_subset\_1 \text{ np\_3 } k1\_numbers \text{ k5\_numbers})) \wedge \\ & ((m1\_subset\_1 \text{ np\_3 } k5\_numbers) \wedge (m1\_subset\_1 \text{ np\_3 } k1\_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \text{ np\_2}) \wedge (m2\_subset\_1 \text{ np\_2 } k1\_numbers \text{ k5\_numbers})) \wedge \\ & ((m1\_subset\_1 \text{ np\_2 } k5\_numbers) \wedge (m1\_subset\_1 \text{ np\_2 } k1\_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$r1\_xxreal\_0 \text{ np\_3 } \text{ np\_4} \quad (9)$$

Assume the following.

$$r1\_xxreal\_0 \text{ np\_2 } \text{ np\_3} \quad (10)$$

Assume the following.

$$r1\_xxreal\_0 \text{ np\_1 } \text{ np\_3} \quad (11)$$

Assume the following.

$$r1\_xxreal\_0 \text{ np\_1 } \text{ np\_2} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 \\ & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (14)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (k4\_finseq\_1 X0 = k9\_xtuple\_0 X0) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (k3\_finseq\_1 X0 = k1\_card\_1 X0) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k5\_numbers) \Rightarrow ((X1 \in k4\_finseq\_1 X0) \Rightarrow ((X1 = np\_2) \vee ((X1 = np\_3) \vee \\ & (k1\_recdef\_1 (k13\_idea\_1 X0) X1 = k1\_recdef\_1 X0 X1)))))) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k5\_numbers) \Rightarrow (((X1 = np\_3) \wedge (X1 \in k4\_finseq\_1 X0)) \Rightarrow (k1\_recdef\_1 \\ & (k13\_idea\_1 X0) X1 = k1\_recdef\_1 X0 np\_2))) \end{aligned} \quad (19)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k5\_numbers) \Rightarrow (((X1 = np\_2) \wedge (X1 \in k4\_finseq\_1 X0)) \Rightarrow (k1\_recdef\_1 \\ & (k13\_idea\_1 X0) X1 = k1\_recdef\_1 X0 np\_3))) \end{aligned} \quad (20)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \quad (21)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow ((v1\_finset\_1 (k1\_card\_1 X0)) \wedge (v1\_card\_1 (k1\_card\_1 X0))) \quad (22)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (23)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Rightarrow ((v1\_funct\_1 X1) \wedge ( \\ & (v1\_finseq\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\ & X0)))))) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0) \Rightarrow ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \quad (25)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (26)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (m2\_subset\_1 (k3\_finseq\_1 X0) k1\_numbers k5\_numbers) \quad (27)$$

Assume the following.

$$\forall X0.v1\_card\_1 (k1\_card\_1 X0) \quad (28)$$

Assume the following.

$$\forall X0.(m1\_finseq\_1 X0 k5\_numbers) \Rightarrow (m2\_finseq\_1 (k13\_idea\_1 X0) k5\_numbers) \quad (29)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow ((X1 = k3\_finseq\_1 X0) \Leftrightarrow (k2\_finseq\_1 X1 = k9\_xtuple\_0 X0))) \end{aligned} \quad (30)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 X1 k5\_numbers) \Rightarrow ((X1 = k13\_idea\_1 X0) \Leftrightarrow ((k3\_finseq\_1 X1 = k3\_finseq\_1 X0) \wedge (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow ((X2 \in k4\_finseq\_1 X0) \Rightarrow (k1\_recdef\_1 X1 X2 = k15\_funcop\_1 k5\_numbers X2 np\_2 (k1\_recdef\_1 X0 np\_3) (k15\_funcop\_1 k5\_numbers X2 np\_3 (k1\_recdef\_1 X0 np\_2) (k1\_recdef\_1 X0 X2)))))))))) \end{aligned} \quad (31)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (32)$$

Assume the following.

$$\forall X0.((v3\_ordinal1 X0) \wedge (v1\_finset\_1 X0)) \Rightarrow (v7\_ordinal1 X0) \quad (33)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (34)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finset\_1 X0))) \quad (35)$$

Assume the following.

$$\forall X0.(v1\_card\_1 X0) \Rightarrow (v3\_ordinal1 X0) \quad (36)$$

**Theorem 1**

$$\forall X0.(m2\_finseq\_1 X0 k5\_numbers) \Rightarrow ((r1\_xxreal\_0 np\_4 (k3\_finseq\_1 X0)) \Rightarrow (k13\_idea\_1 (k13\_idea\_1 X0) = X0))$$