

## t28\_idea\_1

(TMVuYUoKPxNga1i6T4Cc45DPv8aT2Czo3uz)

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

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X2)) \Rightarrow \\ & (r1\_xxreal\_0 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (( \\ & X0 \in k2\_finseq\_1 X1) \Leftrightarrow ((r1\_xxreal\_0 np\_1 X0) \wedge (r1\_xxreal\_0 X0 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_4) \wedge (m2\_subset\_1 np\_4 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_4 k5\_numbers) \wedge (m1\_subset\_1 np\_4 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_3) \wedge (m2\_subset\_1 np\_3 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_3 k5\_numbers) \wedge (m1\_subset\_1 np\_3 k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \quad (5)$$

Assume the following.

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

Assume the following.

$$r1\_xxreal\_0 \ np\_3 \ np\_4 \quad (7)$$

Assume the following.

$$r1\_xxreal\_0 \ np\_2 \ np\_3 \quad (8)$$

Assume the following.

$$r1\_xxreal\_0 \ np\_1 \ np\_4 \quad (9)$$

Assume the following.

$$r1\_xxreal\_0 \ np\_1 \ np\_3 \quad (10)$$

Assume the following.

$$r1\_xxreal\_0 \ np\_1 \ np\_2 \quad (11)$$

Assume the following.

$$r1\_xxreal\_0 \ np\_1 \ np\_1 \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 \ X0 \ X0) \Leftrightarrow (m1\_finseq\_1 \ X0 \ X0) \quad (13)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge (v1\_finseq\_1 \ X0))) \Rightarrow \\ & (k4\_finseq\_1 \ X0 = k9\_xtuple\_0 \ X0) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge (v1\_finseq\_1 \ X0))) \Rightarrow \\ & (k3\_finseq\_1 \ X0 = k1\_card\_1 \ X0) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2\_finseq\_1 \ X0 \ k5\_numbers) \Rightarrow (\forall X1. (m1\_subset\_1 \\ & X1 \ k5\_numbers) \Rightarrow ((X1 \in k4\_finseq\_1 \ X0) \Rightarrow ((X1 = np\_2) \vee ((X1 = np\_3) \vee \\ & (k1\_recdef\_1 \ (k13\_idea\_1 \ X0) \ X1 = k1\_recdef\_1 \ X0 \ X1)))))) \end{aligned} \quad (17)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow ((v1\_finset\_1 (k1\_card\_1 X0)) \wedge (v1\_card\_1 (k1\_card\_1 X0))) \quad (20)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Rightarrow ((v1\_funct\_1 X1) \wedge ( \\ (v1\_finseq\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\ X0)))))) \end{aligned} \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0) \Rightarrow ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1)) \quad (22)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (m2\_subset\_1 (k3\_finseq\_1 X0) k1\_numbers k5\_numbers) \quad (23)$$

Assume the following.

$$\forall X0.v1\_card\_1 (k1\_card\_1 X0) \quad (24)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ (\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow ((X1 = k3\_finseq\_1 \\ X0) \Leftrightarrow (k2\_finseq\_1 X1 = k9\_xtuple\_0 X0))) \end{aligned} \quad (25)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (26)$$

Assume the following.

$$\forall X0.((v3\_ordinal1 X0) \wedge (v1\_finset\_1 X0)) \Rightarrow (v7\_ordinal1 X0) \quad (27)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (28)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finset\_1 X0))) \quad (29)$$

Assume the following.

$$\forall X0.(v1\_card\_1 X0) \Rightarrow (v3\_ordinal1 X0) \quad (30)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\ & X1 k5\_numbers) \Rightarrow (((r1\_xxreal\_0 np\_4 (k3\_finseq\_1 X1)) \wedge (r1\_idea\_1 \\ & X0 (k1\_recdef\_1 X1 np\_1)) \wedge (r1\_idea\_1 X0 (k1\_recdef\_1 X1 np\_2)) \wedge \\ & ((r1\_idea\_1 X0 (k1\_recdef\_1 X1 np\_3)) \wedge (r1\_idea\_1 X0 (k1\_recdef\_1 \\ & X1 np\_4)))))) \Rightarrow ((r1\_idea\_1 X0 (k1\_recdef\_1 (k13\_idea\_1 X1) np\_1)) \wedge \\ & ((r1\_idea\_1 X0 (k1\_recdef\_1 (k13\_idea\_1 X1) np\_2)) \wedge (r1\_idea\_1 \\ & X0 (k1\_recdef\_1 (k13\_idea\_1 X1) np\_3)) \wedge (r1\_idea\_1 X0 (k1\_recdef\_1 \\ & (k13\_idea\_1 X1) np\_4)))))) \end{aligned}$$