

t1\_prepower  
(TMdzbVs8riXBbrC1fWpJf2ewosvQKMMK7Td)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_comseq\_2 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_seq\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v3\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k8\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (X1 \in X0) \Rightarrow (k1\_funct\_1 (k2\_funcop\_1 X0 X2) X1 = X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 \in X1) \Rightarrow ((v1\_funct\_1 (k2\_funcop\_1 X0 X2)) \wedge ((v1\_funct\_2 (k2\_funcop\_1 X0 X2) X0 X1) \wedge (m1\_subset\_1 (k2\_funcop\_1 X0 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0. ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow ((v3\_funct\_1 X0) \Rightarrow (\forall X1. (m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow (k2\_seq\_2 X0 = k8\_nat\_1 k1\_numbers X0 X1))) \quad (4)$$

Assume the following.

$$m1\_subset\_1 \ k1\_xboole\_0 \ k4\_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 \ X0) \wedge ((v1\_funct\_2 \ X0 \ k5\_numbers \ k1\_numbers) \wedge \\ & (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \ k1\_numbers)))))) \Rightarrow \\ & (\forall X1.((v1\_funct\_1 \ X1) \wedge ((v1\_funct\_2 \ X1 \ k5\_numbers \ k1\_numbers) \wedge \\ & (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \ k1\_numbers)))))) \Rightarrow \\ & (((v2\_comseq\_2 \ X0) \wedge ((v2\_comseq\_2 \ X1) \wedge (\forall X2.(m2\_subset\_1 \\ & X2 \ k1\_numbers \ k5\_numbers) \Rightarrow (r1\_xxreal\_0 \ (k1\_seq\_1 \ X0 \ X2) \ (k1\_seq\_1 \\ & X1 \ X2)))))) \Rightarrow (r1\_xxreal\_0 \ (k2\_seq\_2 \ X0) \ (k2\_seq\_2 \ X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 \ X0) \wedge ((\neg v1\_xboole\_0 \ X1) \wedge \\ & (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\ & X2 \ X0 \ X1) \Leftrightarrow (m1\_subset\_1 \ X2 \ X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1\_funct\_1 \ X1) \wedge ((v1\_funct\_2 \\ & X1 \ k5\_numbers \ X0) \wedge (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \\ & X0)))))) \wedge (v7\_ordinal1 \ X2)) \Rightarrow (k8\_nat\_1 \ X0 \ X1 \ X2 = k1\_funct\_1 \ X1 \ X2) \end{aligned} \quad (8)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge (v3\_valued\_0 \ X0))) \Rightarrow (k1\_seq\_1 \ X0 \ X1 = k1\_funct\_1 \ X0 \ X1) \quad (11)$$

Assume the following.

$$(\neg v1\_xboole\_0 \ k4\_ordinal1) \wedge (v3\_ordinal1 \ k4\_ordinal1) \quad (12)$$

Assume the following.

$$\neg v1\_xboole\_0 \ k1\_numbers \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 \ (k2\_funcop\_1 \ X0 \ X1)) \wedge (v1\_funct\_1 \ (k2\_funcop\_1 \ X0 \ X1)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.v3\_funct\_1 (k2\_funcop\_1 X0 X1) \quad (15)$$

Assume the following.

$$m2\_subset\_1 k6\_numbers k1\_numbers k5\_numbers \quad (16)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (17)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Leftrightarrow (X0 \in k1\_numbers) \quad (18)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (19)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v5\_relat\_1 X0 k1\_numbers)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v3\_valued\_0 X0)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \quad (21)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers))) \Rightarrow (((v1\_funct\_1 X0) \wedge (v3\_funct\_1 X0) \wedge (v1\_funct\_2 X0 k5\_numbers k1\_numbers)) \Rightarrow ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge (v2\_comseq\_2 X0)))) \quad (22)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers))))) \Rightarrow (((v2\_comseq\_2 X1) \wedge (\forall X2. (m2\_subset\_1 X2 k1\_numbers k5\_numbers) \Rightarrow (r1\_xreal\_0 X0 (k1\_seq\_1 X1 X2)))) \Rightarrow (r1\_xreal\_0 X0 (k2\_seq\_2 X1))))$$