

t28\_setlim\_1  
(TMRo4764nyxQZ33h6avgSPthomrkgBHAB7C)

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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  $k9\_setfam\_1 : \iota \Rightarrow \iota$  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  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. k9\_setfam\_1 X0 = k1\_zfmisc\_1 X0 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \Rightarrow (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \quad (3)$$

Assume the following.

$$\forall X0. \neg v1\_xboole\_0 (k1\_zfmisc\_1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0 X0) \wedge (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \wedge (m1\_subset\_1 X3 X0))) \Rightarrow (m1\_subset\_1 (k3\_funct\_2 X0 X1 X2 X3) X1) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_xboole\_0 X0) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_xboole\_0 X2)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ k5\_numbers (k9\_setfam\_1 X0)))) \Rightarrow (((v1\_funct\_1 X1) \wedge (v1\_funct\_2 \\ X1 k5\_numbers (k9\_setfam\_1 X0))) \Rightarrow ((\neg v1\_xboole\_0 X1) \wedge ((v1\_funct\_1 \\ X1) \wedge (v1\_funct\_2 X1 k5\_numbers (k9\_setfam\_1 X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (v1\_funct\_1 X0) \quad (8)$$

**Theorem 1**

$$\begin{aligned} \forall X0.\forall X1.(((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers \\ (k9\_setfam\_1 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ k5\_numbers (k9\_setfam\_1 X0)))))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ k5\_numbers) \Rightarrow (m1\_subset\_1 (ReplSep (toset (\lambda X3 : \iota.m1\_subset\_1 \\ X3 k5\_numbers)) (\lambda X3 : \iota.r1\_xxreal\_0 X2 X3) (\lambda X3 : \iota.k3\_funct\_2 \\ k5\_numbers (k9\_setfam\_1 X0) X1 X3)) (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ X0)))))) \end{aligned}$$