

## t47\_setlim\_2

(TMVjy8LxfopbYLKYrAqDxvUWrNYPZ1EKsUm)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  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  $k9\_setfam\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_setlim\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_setlim\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_prob\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers \\
 & (k9\_setfam\_1 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & k5\_numbers (k9\_setfam\_1 X0)))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge \\
 & ((v1\_funct\_2 X2 k5\_numbers (k9\_setfam\_1 X0)) \wedge (m1\_subset\_1 X2 \\
 & (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (k9\_setfam\_1 X0)))))) \Rightarrow \\
 & (k1\_prob\_1 X0 (k2\_setlim\_2 X0 X1 X2) = k4\_subset\_1 X0 (k1\_prob\_1 \\
 & X0 X1) (k1\_prob\_1 X0 X2)))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1. \forall X2. \\
 & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (k9\_setfam\_1 X1)) \wedge \\
 & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (k9\_setfam\_1 \\
 & X1)))))) \Rightarrow (\forall X3. ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 k5\_numbers \\
 & (k9\_setfam\_1 X1)) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & k5\_numbers (k9\_setfam\_1 X1)))))) \Rightarrow (k10\_nat\_1 (k9\_setfam\_1 X1) \\
 & (k2\_setlim\_2 X1 X2 X3) X0 = k2\_setlim\_2 X1 (k10\_nat\_1 (k9\_setfam\_1 \\
 & X1) X2 X0) (k10\_nat\_1 (k9\_setfam\_1 X1) X3 X0)))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.\forall X2. \\ & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (k9\_setfam\_1 X1)) \wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (k9\_setfam\_1 \\ & X1)))))) \Rightarrow (k8\_nat\_1 (k9\_setfam\_1 X1) (k4\_setlim\_1 X1 X2) X0 = k1\_prob\_1 \\ & X1 (k10\_nat\_1 (k9\_setfam\_1 X1) X2 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.k9\_setfam\_1 X0 = k1\_zfmisc\_1 X0 \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0 (k1\_zfmisc\_1 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 \\ & X1 k5\_numbers (k9\_setfam\_1 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 k5\_numbers (k9\_setfam\_1 X0)))))) \wedge ((v1\_funct\_1 \\ & X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (k9\_setfam\_1 X0)) \wedge (m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (k9\_setfam\_1 X0)))))) \Rightarrow \\ & ((v1\_funct\_1 (k2\_setlim\_2 X0 X1 X2)) \wedge ((v1\_funct\_2 (k2\_setlim\_2 \\ & X0 X1 X2) k5\_numbers (k9\_setfam\_1 X0)) \wedge (m1\_subset\_1 (k2\_setlim\_2 \\ & X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (k9\_setfam\_1 X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0) \wedge (((v1\_funct\_1 \\ & X1) \wedge ((v1\_funct\_2 X1 k5\_numbers X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 k5\_numbers X0)))))) \wedge (v7\_ordinal1 X2))) \Rightarrow ((v1\_funct\_1 \\ & (k10\_nat\_1 X0 X1 X2)) \wedge ((v1\_funct\_2 (k10\_nat\_1 X0 X1 X2) k5\_numbers \\ & X0) \wedge (m1\_subset\_1 (k10\_nat\_1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1. \forall X2. \\ & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers (k9\_setfam\_1 X1)) \wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (k9\_setfam\_1 \\ & X1)))))) \Rightarrow (\forall X3. ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 k5\_numbers \\ & (k9\_setfam\_1 X1)) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers (k9\_setfam\_1 X1)))))) \Rightarrow (k8\_nat\_1 (k9\_setfam\_1 X1) \\ & (k4\_setlim\_1 X1 (k2\_setlim\_2 X1 X2 X3)) X0 = k4\_subset\_1 X1 (k8\_nat\_1 \\ & (k9\_setfam\_1 X1) (k4\_setlim\_1 X1 X2) X0) (k8\_nat\_1 (k9\_setfam\_1 \\ & X1) (k4\_setlim\_1 X1 X3) X0))) \end{aligned}$$