

t53_setlim_2 (TMMD- VXo2puC9EKa8ngv2hePLiKgF6FUr15E)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_setlim_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_setlim_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k9_setfam_1 X0)) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 \\ & X0)))))) \Rightarrow (k3_prob_1 X0 (k8_setlim_2 X0 X2 X1) = k7_subset_1 X0 (\\ & k3_prob_1 X0 X2) X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. \forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k9_setfam_1 X1)) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 \\ & X1)))))) \Rightarrow (k8_nat_1 (k9_setfam_1 X1) (k2_setlim_1 X1 X2) X0 = k3_prob_1 \\ & X1 (k10_nat_1 (k9_setfam_1 X1) X2 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. \forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 X1)) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 k5_numbers (k9_setfam_1 X1)) \wedge (m1_subset_1 X3 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 X1)))))) \Rightarrow \\ & (k10_nat_1 (k9_setfam_1 X1) (k8_setlim_2 X1 X3 X2) X0 = k8_setlim_2 \\ & X1 (k10_nat_1 (k9_setfam_1 X1) X3 X0) X2)) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. k9_setfam_1 X0 = k1_zfmisc_1 X0 \tag{4}$$

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.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1_funct_1 X1) \wedge ((v1_funct_2 \\ & X1 k5_numbers (k9_setfam_1 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (k9_setfam_1 X0)))))) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 X0))) \Rightarrow ((v1_funct_1 (k8_setlim_2 X0 X1 X2)) \wedge ((\\ & v1_funct_2 (k8_setlim_2 X0 X1 X2) k5_numbers (k9_setfam_1 X0)) \wedge \\ & (m1_subset_1 (k8_setlim_2 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (k9_setfam_1 X0)))))) \end{aligned} \quad (7)$$

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

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. \forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 X1)) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 k5_numbers (k9_setfam_1 X1)) \wedge (m1_subset_1 X3 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 X1)))))) \Rightarrow \\ & (k8_nat_1 (k9_setfam_1 X1) (k2_setlim_1 X1 (k8_setlim_2 X1 X3 X2)) \\ & X0 = k7_subset_1 X1 (k8_nat_1 (k9_setfam_1 X1) (k2_setlim_1 X1 X3) \\ & X0) X2))) \end{aligned}$$