

t45_setlim_2

(TMczgTQjwUs4pFwifTtBGnLsYPgGFKhGzx2)

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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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ 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 $k3_setlim_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.\forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k9_setfam_1 X1)) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 \\ & X1)))))) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers \\ & (k9_setfam_1 X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (k9_setfam_1 X1)))))) \Rightarrow (k10_nat_1 (k9_setfam_1 X1) \\ & (k3_setlim_2 X1 X2 X3) X0 = k3_setlim_2 X1 (k10_nat_1 (k9_setfam_1 \\ & X1) X2 X0) (k10_nat_1 (k9_setfam_1 X1) X3 X0))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers \\ & (k9_setfam_1 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (k9_setfam_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 k5_numbers (k9_setfam_1 X0)) \wedge (m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 X0)))))) \Rightarrow \\ & (r1_tarski (k3_prob_1 X0 (k3_setlim_2 X0 X1 X2)) (k7_subset_1 X0 \\ & (k3_prob_1 X0 X1) (k3_prob_1 X0 X2)))) \end{aligned} \quad (3)$$

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.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1)\wedge((v1_funct_2 \\ & X1 k5_numbers (k9_setfam_1 X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (k9_setfam_1 X0))))))\wedge((v1_funct_1 \\ & X2)\wedge((v1_funct_2 X2 k5_numbers (k9_setfam_1 X0))\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 X0))))))\Rightarrow \\ & ((v1_funct_1 (k3_setlim_2 X0 X1 X2))\wedge((v1_funct_2 (k3_setlim_2 \\ & X0 X1 X2) k5_numbers (k9_setfam_1 X0))\wedge(m1_subset_1 (k3_setlim_2 \\ & X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 X0)))))) \end{aligned} \quad (7)$$

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

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.\forall X2. \\ & ((v1_funct_1 X2)\wedge((v1_funct_2 X2 k5_numbers (k9_setfam_1 X1))\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 \\ & X1))))))\Rightarrow(\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 k5_numbers \\ & (k9_setfam_1 X1))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (k9_setfam_1 X1))))))\Rightarrow(r1_tarski (k8_nat_1 (k9_setfam_1 \\ & X1) (k2_setlim_1 X1 (k3_setlim_2 X1 X2 X3)) X0) (k7_subset_1 X1 (\\ & k8_nat_1 (k9_setfam_1 X1) (k2_setlim_1 X1 X2) X0) (k8_nat_1 (k9_setfam_1 \\ & X1) (k2_setlim_1 X1 X3) X0)))))) \end{aligned}$$