

t81_setlim_2

(TML48AFa3X6UzswZLw7uVBtcoh8a4pYTP7e)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_kurato_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_setlim_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k3_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 X1)) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 k5_numbers (k9_setfam_1 X1)) \wedge (m1_subset_1 X3 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 X1)))))) \Rightarrow \\ & (k8_nat_1 (k9_setfam_1 X1) (k4_setlim_1 X1 (k5_setlim_2 X1 X3 X2)) \\ & X0 = k9_subset_1 X1 X2 (k8_nat_1 (k9_setfam_1 X1) (k4_setlim_1 X1 \\ & X3) X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k9_setfam_1 X0)) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 \\ & X0)))))) \Rightarrow (k3_prob_1 X0 (k5_setlim_2 X0 X2 X1) = k9_subset_1 X0 X1 \\ & (k3_prob_1 X0 X2))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.k9_setfam_1 X0 = k1_zfmisc_1 X0 \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1_funct_1 X1) \wedge ((v1_funct_2 \\ & X1 k5_numbers (k9_setfam_1 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (k9_setfam_1 X0)))))) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 X0))) \Rightarrow ((v1_funct_1 (k5_setlim_2 X0 X1 X2)) \wedge ((\\ & v1_funct_2 (k5_setlim_2 X0 X1 X2) k5_numbers (k9_setfam_1 X0)) \wedge \\ & (m1_subset_1 (k5_setlim_2 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (k9_setfam_1 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers \\ & (k9_setfam_1 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (k9_setfam_1 X0)))))) \Rightarrow ((v1_funct_1 (k4_setlim_1 \\ & X0 X1)) \wedge ((v1_funct_2 (k4_setlim_1 X0 X1) k5_numbers (k9_setfam_1 \\ & X0)) \wedge (m1_subset_1 (k4_setlim_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (k9_setfam_1 X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers \\ & (k9_setfam_1 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (k9_setfam_1 X0)))))) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ & (k1_zfmisc_1 X0)) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 \\ & X3 k5_numbers (k9_setfam_1 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (k9_setfam_1 X0)))))) \Rightarrow ((X3 = k5_setlim_2 \\ & X0 X1 X2) \Leftrightarrow (\forall X4. (m1_subset_1 X4 k5_numbers) \Rightarrow (k8_nat_1 (\\ & k9_setfam_1 X0) X3 X4 = k9_subset_1 X0 X2 (k8_nat_1 (k9_setfam_1 \\ & X0) X1 X4)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers \\ & (k9_setfam_1 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (k9_setfam_1 X0)))))) \Rightarrow (k4_kurato_0 X0 X1 = k3_prob_1 \\ & X0 (k4_setlim_1 X0 X1)) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (k9_setfam_1 X0)) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k9_setfam_1 \\ & X0)))))) \Rightarrow (k4_kurato_0 X0 (k5_setlim_2 X0 X2 X1) = k9_subset_1 X0 \\ & X1 (k4_kurato_0 X0 X2))) \end{aligned}$$