

t35_setlim_2

(TMPUMgzuiGjVzgakQ9Zb3je8XEWu3Ye8KEoS)

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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 $r1_tarSKI : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_setlim_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Assume the following.

$$m1_subset_1 \ k1_xboole_0 \ k4_ordinal1 \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 \ X2) \wedge ((v1_funct_2 \\ & \ X2 \ k5_numbers \ (k9_setfam_1 \ X0)) \wedge (m1_subset_1 \ X2 \ (k1_zfmisc_1 \\ & \ (k2_zfmisc_1 \ k5_numbers \ (k9_setfam_1 \ X0)))))) \Rightarrow ((X1 \in k3_prob_1 \\ & \ X0 \ X2) \Leftrightarrow (\forall X3. (m2_subset_1 \ X3 \ k1_numbers \ k5_numbers) \Rightarrow (X1 \in \\ & \ k8_nat_1 \ (k9_setfam_1 \ X0) \ X2 \ X3))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)) \Rightarrow (k7_subset_1 \ X0 \ X1 \ X2 = k4_xboole_0 \ X1 \ X2) \tag{3}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{4}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1_funct_1 X1) \wedge ((v1_funct_2 \\ & X1 \ k5_numbers \ (k9_setfam_1 \ X0)) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ k5_numbers \ (k9_setfam_1 \ X0)))))) \wedge (m1_subset_1 \\ & X2 \ (k1_zfmisc_1 \ X0))) \Rightarrow ((v1_funct_1 \ (k7_setlim_2 \ X0 \ X1 \ X2)) \wedge ((\\ & v1_funct_2 \ (k7_setlim_2 \ X0 \ X1 \ X2) \ k5_numbers \ (k9_setfam_1 \ X0)) \wedge \\ & (m1_subset_1 \ (k7_setlim_2 \ X0 \ X1 \ X2) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & k5_numbers \ (k9_setfam_1 \ X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$m2_subset_1 \ k6_numbers \ k1_numbers \ k5_numbers \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 \ k5_numbers \\ & (k9_setfam_1 X0)) \wedge (m1_subset_1 X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & k5_numbers \ (k9_setfam_1 X0)))))) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ & (k1_zfmisc_1 X0)) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 \\ & X3 \ k5_numbers \ (k9_setfam_1 X0)) \wedge (m1_subset_1 X3 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ k5_numbers \ (k9_setfam_1 X0)))))) \Rightarrow ((X3 = k7_setlim_2 \\ & X0 \ X1 \ X2) \Leftrightarrow (\forall X4. (m1_subset_1 X4 \ k5_numbers) \Rightarrow (k8_nat_1 (\\ & k9_setfam_1 X0) \ X3 \ X4 = k7_subset_1 \ X0 \ X2 \ (k8_nat_1 \ (k9_setfam_1 \\ & X0) \ X1 \ X4)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k4_xboole_0 \ X0 \ X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (\neg X3 \in X1))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (r1_tarski \ X0 \ X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow \\ & (X2 \in X1)) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 \ k5_numbers \ (k9_setfam_1 \ X0)) \wedge \\ & (m1_subset_1 X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ (k9_setfam_1 \\ & X0)))))) \Rightarrow (r1_tarski \ (k3_prob_1 \ X0 \ (k7_setlim_2 \ X0 \ X2 \ X1)) \ (k7_subset_1 \\ & X0 \ X1 \ (k3_prob_1 \ X0 \ X2)))) \end{aligned}$$