

t6_limfunc3

(TMEjmpX86hbp3TeVUQaH27Ry8shektNdLG8)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ 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 $k5_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v2_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_seq_2 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_prob_1 : \iota \Rightarrow \iota$ be given. Let $k3_limfunc1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_funct_1 \\
 & X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge (m1_subset_1 X1 (\\
 & k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow (\forall X2. \\
 & ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\
 & k1_numbers)))) \Rightarrow ((\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \\
 & ((\neg r1_xxreal_0 (k1_seq_1 X1 X3) (k9_real_1 X0 (k10_real_1 np_1 \\
 & (k2_nat_1 X3 np_1)))) \wedge ((\neg r1_xxreal_0 X0 (k1_seq_1 X1 X3)) \wedge (k1_seq_1 \\
 & X1 X3 \in k1_relset_1 k1_numbers X2)))) \Rightarrow ((v2_comseq_2 X1) \wedge ((k2_seq_2 \\
 & X1 = X0) \wedge ((r1_tarski (k2_relset_1 k1_numbers X1) (k1_relset_1 \\
 & k1_numbers X2)) \wedge (r1_tarski (k2_relset_1 k1_numbers X1) (k9_subset_1 \\
 & k1_numbers (k1_relset_1 k1_numbers X2) (k10_prob_1 X0))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_funct_1 \\ & X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge (m1_subset_1 X1 (\\ & k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\ & k1_numbers)))) \Rightarrow (((r1_tarski (k10_xtuple_0 X1) (k9_subset_1 \\ & k1_numbers (k9_xtuple_0 X2) (k10_prob_1 X0))) \vee (r1_tarski (k10_xtuple_0 \\ & X1) (k9_subset_1 k1_numbers (k9_xtuple_0 X2) (k3_limfunc1 X0))) \Rightarrow \\ & (r1_tarski (k10_xtuple_0 X1) (k6_subset_1 (k9_xtuple_0 X2) (k1_tarski \\ & X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_funct_1 \\ & X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge (m1_subset_1 X1 (\\ & k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\ & k1_numbers)))) \Rightarrow ((\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \\ & ((\neg r1_xreal_0 (k1_seq_1 X1 X3) (k9_real_1 X0 (k10_real_1 np_1 \\ & (k2_nat_1 X3 np_1)))) \wedge ((\neg r1_xreal_0 X0 (k1_seq_1 X1 X3)) \wedge (k1_seq_1 \\ & X1 X3 \in k9_xtuple_0 X2)))) \Rightarrow ((v2_comseq_2 X1) \wedge ((k2_seq_2 X1 = X0) \wedge \\ & (r1_tarski (k10_xtuple_0 X1) (k6_subset_1 (k9_xtuple_0 X2) (k1_tarski \\ & X0)))))) \end{aligned}$$