

t30_limfunc2 (TM-
RhX8CB45Jbz4UnYYymxXyyFGkNQK94Rb2)

October 27, 2020

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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v6_valued_0 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_seq_2 : \iota \Rightarrow o$ be given. Let $r5_limfunc2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8_valued_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_valued_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_funct_1 \\
& X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\
& ((\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\neg(\neg r1_xxreal_0 X2 \\
& X0) \wedge (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow (\neg(\neg r1_xxreal_0 \\
& X2 X3) \wedge (\neg r1_xxreal_0 X3 X0) \wedge (X3 \in k1_relset_1 k1_numbers X1)))))) \Rightarrow \\
& ((\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\neg(v8_valued_0 (k2_partfun1 \\
& k1_numbers k1_numbers X1 (k2_rcomp_1 X0 (k7_real_1 X0 X2)))))) \wedge (\\
& \neg v1_seq_2 (k2_partfun1 k1_numbers k1_numbers X1 (k2_rcomp_1 X0 \\
& (k7_real_1 X0 X2)))))) \vee (r5_limfunc2 X1 X0)))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \tag{2}$$

Assume the following.

$$v3_membered k1_numbers \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((v1_funct_1 \\ & (k2_partfun1 X0 X1 X2 X3)) \wedge (m1_subset_1 (k2_partfun1 X0 X1 X2 X3) \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. (v3_membered X0) \Rightarrow (v2_membered X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v2_valued_0 \\ & X0) \wedge (v6_valued_0 X0)))) \Rightarrow ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge \\ & ((v2_valued_0 X0) \wedge (v8_valued_0 X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v2_membered X1) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v2_valued_0 X2)) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1. ((v1_funct_1 \\ & X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ & ((\forall X2. (m1_subset_1 X2 k1_numbers) \Rightarrow (\neg(\neg r1_xxreal_0 X2 \\ & X0) \wedge (\forall X3. (m1_subset_1 X3 k1_numbers) \Rightarrow (\neg(\neg r1_xxreal_0 \\ & X2 X3) \wedge (\neg r1_xxreal_0 X3 X0) \wedge (X3 \in k1_relset_1 k1_numbers X1)))))) \Rightarrow \\ & ((\forall X2. (m1_subset_1 X2 k1_numbers) \Rightarrow (\neg(\neg r1_xxreal_0 X2 \\ & k6_numbers) \wedge ((v6_valued_0 (k2_partfun1 k1_numbers k1_numbers \\ & X1 (k2_rcomp_1 X0 (k7_real_1 X0 X2)))) \wedge (\neg v1_seq_2 (k2_partfun1 \\ & k1_numbers k1_numbers X1 (k2_rcomp_1 X0 (k7_real_1 X0 X2)))))) \vee \\ & (r5_limfunc2 X1 X0)))) \end{aligned}$$