

t41_limfunc1

(TMdgCG42fynpSbNncKiDMTeT5iPXRofgQ8Z)

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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 $k1_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $v1_limfunc1 : \iota \Rightarrow o$ be given. Let $v2_limfunc1 : \iota \Rightarrow o$ be given. Let $v2_comseq_2 : \iota \Rightarrow o$ be given. Let $k52_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_seq_2 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k37_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k50_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k35_valued_1 : \iota \Rightarrow \iota$ be given. Let $k18_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (((v1_limfunc1 X0) \vee (v2_limfunc1 X0)) \Rightarrow ((v2_comseq_2 (k37_valued_1 \\ & k5_numbers k1_numbers X0)) \wedge (k2_seq_2 (k37_valued_1 k5_numbers \\ & k1_numbers X0) = k6_numbers))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (\forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (((v2_comseq_2 X0) \wedge ((v1_comseq_2 X1) \wedge (k2_seq_2 X0 = k6_numbers))) \Rightarrow \\ & (k2_seq_2 (k20_valued_1 k5_numbers k1_numbers k1_numbers X0 X1) = \\ & k6_numbers))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (((v2_comseq_2 X0) \wedge ((v1_comseq_2 X1) \wedge (k2_seq_2 X0 = k6_numbers)) \Rightarrow \\
& (v2_comseq_2 (k20_valued_1 k5_numbers k1_numbers k1_numbers \\
& X0 X1))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((v3_membered \\
& X1) \wedge ((v3_membered X2) \wedge (((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1)))) \wedge ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X2))))))) \Rightarrow (k52_valued_1 X0 X1 X2 X3 X4 = k50_valued_1 \\
& X3 X4)
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. ((v3_membered X1) \wedge ((v1_funct_1 \\
& X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (k37_valued_1 \\
& X0 X1 X2 = k35_valued_1 X2)
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((v3_membered \\
& X1) \wedge ((v3_membered X2) \wedge (((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1)))) \wedge ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X2))))))) \Rightarrow (k20_valued_1 X0 X1 X2 X3 X4 = k18_valued_1 \\
& X3 X4)
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v1_xboole_0 X1) \wedge (v3_membered \\
& X1)) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 \\
& (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v1_funct_1 (k35_valued_1 \\
& X2)) \wedge (v1_partfun1 (k35_valued_1 X2) X0))
\end{aligned} \tag{7}$$

Assume the following.

$$v3_membered k1_numbers \tag{8}$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \tag{9}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v3_membered\ X1)\wedge((v1_funct_1 \\ & X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))\Rightarrow((v1_funct_1 \\ & (k37_valued_1\ X0\ X1\ X2))\wedge(m1_subset_1\ (k37_valued_1\ X0\ X1\ X2)\ (\\ & k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_valued_0\ X0)))\Rightarrow \\ & (\forall X1.((v1_relat_1\ X1)\wedge((v1_funct_1\ X1)\wedge(v1_valued_0 \\ & X1))))\Rightarrow(k50_valued_1\ X0\ X1 = k18_valued_1\ X0\ (k35_valued_1\ X1)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_valued_0 \\ & X0)))\wedge((v1_relat_1\ X1)\wedge((v1_funct_1\ X1)\wedge(v1_valued_0\ X1))))\Rightarrow \quad (12) \\ & (k18_valued_1\ X0\ X1 = k18_valued_1\ X1\ X0) \end{aligned}$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v3_valued_0\ X0))\Rightarrow((v1_relat_1\ X0)\wedge(v1_valued_0\ X0)) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v5_relat_1\ X0\ k1_numbers))\Rightarrow((v1_relat_1\ X0)\wedge(v3_valued_0\ X0)) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v1_partfun1\ X2\ X0)\Rightarrow(v1_funct_2\ X2\ X0\ X1)) \end{aligned} \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1\ X0)\wedge((v1_funct_2\ X0\ k5_numbers\ k1_numbers)\wedge \\ & (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k1_numbers))))\Rightarrow \\ & (\forall X1.((v1_funct_1\ X1)\wedge((v1_funct_2\ X1\ k5_numbers\ k1_numbers)\wedge \\ & (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k1_numbers))))\Rightarrow \\ & ((v1_comseq_2\ X0)\Rightarrow(((\neg v1_limfunc1\ X1)\wedge(\neg v2_limfunc1\ X1))\vee(\\ & (v2_comseq_2\ (k52_valued_1\ k5_numbers\ k1_numbers\ k1_numbers \\ & X0\ X1))\wedge(k2_seq_2\ (k52_valued_1\ k5_numbers\ k1_numbers\ k1_numbers \\ & X0\ X1) = k6_numbers)))))) \end{aligned}$$