

t15_limfunc1

(TMZ81K59z7LJ6i1gSz7KUXHhuNCRqc4ZwDj)

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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 $v1_limfunc1 : \iota \Rightarrow o$ be given. Let $v2_limfunc1 : \iota \Rightarrow o$ be given. Let $k32_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v3_funct_1 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k30_valued_1 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow (((v2_limfunc1 X0) \Rightarrow \\ & ((r1_xxreal_0 X1 k6_numbers) \vee (v2_limfunc1 (k26_valued_1 k5_numbers \\ & k1_numbers X0 X1)))))) \wedge (((v2_limfunc1 X0) \Rightarrow ((r1_xxreal_0 k6_numbers \\ & X1) \vee (v1_limfunc1 (k26_valued_1 k5_numbers k1_numbers X0 X1)))))) \wedge \\ & ((X1 = k6_numbers) \Rightarrow ((k2_relset_1 k1_numbers (k26_valued_1 k5_numbers \\ & k1_numbers X0 X1) = k1_tarski k6_numbers) \wedge (v3_funct_1 (k26_valued_1 \\ & k5_numbers k1_numbers X0 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow (((v1_limfunc1 X0) \Rightarrow \\
& ((r1_xxreal_0 X1 k6_numbers) \vee (v1_limfunc1 (k26_valued_1 k5_numbers \\
& k1_numbers X0 X1)))) \wedge (((v1_limfunc1 X0) \Rightarrow ((r1_xxreal_0 k6_numbers \\
& X1) \vee (v2_limfunc1 (k26_valued_1 k5_numbers k1_numbers X0 X1)))) \wedge \\
& ((X1 = k6_numbers) \Rightarrow ((k2_relset_1 k1_numbers (k26_valued_1 k5_numbers \\
& k1_numbers X0 X1) = k1_tarski k6_numbers) \wedge (v3_funct_1 (k26_valued_1 \\
& k5_numbers k1_numbers X0 X1))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers))
\end{aligned} \tag{4}$$

Assume the following.

$$v1_xboole_0 np_0 \tag{5}$$

Assume the following.

$$\neg r1_xxreal_0 np_0 (k4_xcmplx_0 np_1) \tag{6}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. ((v3_membered X1) \wedge ((v1_funct_1 \\
& X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (k32_valued_1 \\
& X0 X1 X2 = k30_valued_1 X2)
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((v3_membered X1) \wedge \\
& (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))) \wedge (v1_xreal_0 X3))) \Rightarrow (k26_valued_1 X0 X1 X2 X3 = k24_valued_1 \\
& X2 X3)
\end{aligned} \tag{9}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k1_real_1 X0 = k4_xcmplx_0 X0) \tag{10}$$

Assume the following.

$$v3_membered k1_numbers \tag{11}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (m1_subset_1 (k1_real_1 X0) k1_numbers) \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow (k30_valued_1 X0 = k24_valued_1 X0 (k4_xcmplx_0 np_1)) \quad (13)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (v1_membered X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(v1_membered X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_valued_0 X2)) \quad (16)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (17)$$

Theorem 1

$$\forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow (((v1_limfunc1 X0) \Rightarrow (v2_limfunc1 (k32_valued_1 k5_numbers k1_numbers X0))) \wedge ((v2_limfunc1 X0) \Rightarrow (v1_limfunc1 (k32_valued_1 k5_numbers k1_numbers X0))))$$