

t1_limfunc3

(TMKDU42TFiaQcBJgBSmhTwHeRo57zDKQ2Ph)

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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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_prob_1 : \iota \Rightarrow \iota$ be given. Let $k3_limfunc1 : \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xxreal_0 : \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v2_valued_0 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (\forall X2. \neg (X2 \in X1) \wedge (\forall X3. \neg (X3 \in X1) \wedge (X3 \in X2))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (k4_xxreal_1 X0 k1_xxreal_0 = \text{ReplSep} (\text{toset } (\lambda X1 : \iota. m1_subset_1 X1 k1_numbers)) (\lambda X1 : \iota. \neg r1_xxreal_0 X1 X0) (\lambda X1 : \iota. X1)) \quad (3)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (k4_xxreal_1 k2_xxreal_0 X0 = \text{ReplSep} (\text{toset } (\lambda X1 : \iota. m1_subset_1 X1 k1_numbers)) (\lambda X1 : \iota. \neg r1_xxreal_0 X0 X1) (\lambda X1 : \iota. X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 X1 X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X1 X2)))) \Rightarrow (\neg(X0 \in k2_relset_1 X2 X3) \wedge (\forall X4.(m1_subset_1 \\ & X4 X1) \Rightarrow (X0 \neq k1_funct_1 X3 X4))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (9)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (11)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \Rightarrow (v3_membered (k10_xtuple_0 X0)) \quad (12)$$

Assume the following.

$$v3_membered k1_numbers \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v2_valued_0 X0)) \Rightarrow (v2_membered (k10_xtuple_0 X0)) \quad (14)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (m1_subset_1 (k3_limfunc1 X0) (k1_zfmisc_1 k1_numbers)) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (m1_subset_1 (k10_prob_1 X0) (k1_zfmisc_1 k1_numbers)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k4_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (\neg X3 \in X1))) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (20)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k3_limfunc1 X0 = k4_xxreal_1 X0 k1_xxreal_0) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (22)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (k10_prob_1 X0 = k4_xxreal_1 k2_xxreal_0 X0) \quad (23)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (24)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (v2_membered X0) \quad (25)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (26)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (27)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (28)$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v3_valued_0 X2)) \quad (29)$$

Assume the following.

$$\forall X0.\forall X1.(v2_membered X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v2_valued_0 X2)) \quad (30)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xreal_0 X1)) \quad (31)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xxreal_0 X1)) \quad (32)$$

Theorem 1

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