

t20_limfunc1

(TMbqAFcEP9omDVXTgSWUsfeYkgbviCs4i38)

October 27, 2020

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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_limfunc1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\neg \forall X1.(m2_subset_1 X1 k1_numbers \quad (1) \\ k5_numbers) \Rightarrow (r1_xxreal_0 X1 X0))$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0 X2) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow \quad (2) \\ (r1_xxreal_0 X0 X2))))$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \quad (3) \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (5)$$

Assume the following.

$$v3_membered k1_numbers \quad (6)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (7)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 \ X0)\wedge((v1_funct_1 \ X0)\wedge(v3_valued_0 \ X0)))\Rightarrow(m1_subset_1 \ (k1_seq_1 \ X0 \ X1) \ k1_numbers) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 \ X0)\wedge((v1_funct_2 \ X0 \ k5_numbers \ k1_numbers)\wedge \\ & (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k1_numbers))))\Rightarrow \\ & ((v1_limfunct \ X0)\Leftrightarrow(\forall X1.(m1_subset_1 \ X1 \ k1_numbers)\Rightarrow(\\ & \exists X2.(m2_subset_1 \ X2 \ k1_numbers \ k5_numbers)\wedge(\forall X3. \\ & (m2_subset_1 \ X3 \ k1_numbers \ k5_numbers)\Rightarrow(\neg(r1_xxreal_0 \ X2 \ X3)\wedge \\ & (r1_xxreal_0 \ (k1_seq_1 \ X0 \ X3) \ X1)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0)\Rightarrow(v1_xxreal_0 \ X0) \quad (11)$$

Assume the following.

$$\forall X0.(v3_membered \ X0)\Rightarrow(v2_membered \ X0) \quad (12)$$

Assume the following.

$$\forall X0.(v2_membered \ X0)\Rightarrow(\forall X1.(m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0))\Rightarrow(v2_membered \ X1)) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers)\Rightarrow(v1_xreal_0 \ X0) \quad (14)$$

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.

$$\forall X0.\forall X1.(v3_membered \ X1)\Rightarrow(\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1)))\Rightarrow(v3_valued_0 \ X2)) \quad (16)$$

Assume the following.

$$\forall X0.(v2_membered \ X0)\Rightarrow(\forall X1.(m1_subset_1 \ X1 \ X0)\Rightarrow(v1_xxreal_0 \ X1)) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & ((\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (k1_seq_1 \\ & X0 X1 = X1)) \Rightarrow (v1_limfunc1 X0)) \end{aligned}$$