

t60_rinfsup1

(TMPgHWc6pR4eQYjJAH7GAmtj9spgQNSSukN)

October 27, 2020

Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_seq_2 : \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_rinfsup1 : \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $k3_rinfsup1 : \iota \Rightarrow \iota$ be given. Let $k32_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_seq_2 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k30_valued_1 : \iota \Rightarrow \iota$ 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 $v3_valued_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow ((v2_seq_2 \\ & X1) \Rightarrow (k1_seq_1 (k3_rinfsup1 X1) X0 = k1_real_1 (k1_seq_1 (k4_rinfsup1 \\ & (k32_valued_1 k5_numbers k1_numbers X1)) X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & ((v1_seq_2 X0) \Leftrightarrow (v2_seq_2 (k32_valued_1 k5_numbers k1_numbers \\ & X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v3_membered X1) \wedge ((v1_funct_1 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (k32_valued_1 \\ & X0 X1 X2 = k30_valued_1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3_membered\ X1)\wedge((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))))\Rightarrow(k32_valued_1\ X0\ X1\ (k32_valued_1\ X0\ X1\ X2) = X2) \quad (4)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(k1_real_1\ (k1_real_1\ X0) = X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0\ X1)\wedge(v3_membered\ X1))\wedge((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ X0\ X1)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))))\Rightarrow((v1_funct_1\ (k30_valued_1\ X2))\wedge(v1_partfun1\ (k30_valued_1\ X2)\ X0)) \quad (6)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (7)$$

Assume the following.

$$\neg v1_xboole_0\ k1_numbers \quad (8)$$

Assume the following.

$$\forall X0.((v1_funct_1\ X0)\wedge((v1_funct_2\ X0\ k5_numbers\ k1_numbers)\wedge(m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k1_numbers))))))\Rightarrow((v1_funct_1\ (k4_rinfsup1\ X0))\wedge((v1_funct_2\ (k4_rinfsup1\ X0)\ k5_numbers\ k1_numbers)\wedge(m1_subset_1\ (k4_rinfsup1\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k1_numbers)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3_membered\ X1)\wedge((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))))\Rightarrow(((v1_funct_1\ (k32_valued_1\ X0\ X1\ X2))\wedge(m1_subset_1\ (k32_valued_1\ X0\ X1\ X2)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v3_valued_0\ X0)))\Rightarrow(m1_subset_1\ (k1_seq_1\ X0\ X1)\ k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow((v1_partfun1 X2 X0)\Rightarrow(v1_funct_2 X2 X0 X1)) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v3_membered X1)\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v3_valued_0 X2)) \end{aligned} \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers)\Rightarrow(\forall X1. \\ & ((v1_funct_1 X1)\wedge((v1_funct_2 X1 k5_numbers k1_numbers)\wedge(m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers))))))\Rightarrow((v1_seq_2 \\ & X1)\Rightarrow(k1_seq_1 (k4_rinfsup1 X1) X0 = k1_real_1 (k1_seq_1 (k3_rinfsup1 \\ & (k32_valued_1 k5_numbers k1_numbers X1)) X0))) \end{aligned}$$