

t61_rinfsup1 (TMMD-
KLjSCDtr8Fe4Wg59Vk6MfLpuSA8Rg1G)

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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 $v2_seq_2 : \iota \Rightarrow o$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_rinfsup1 : \iota \Rightarrow \iota$ be given. Let $k32_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_rinfsup1 : \iota \Rightarrow \iota$ 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 $k1_real_1 : \iota \Rightarrow \iota$ 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. 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.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & ((r2_funct_2 k5_numbers k1_numbers X0 (k32_valued_1 k5_numbers \\ & k1_numbers X1)) \Leftrightarrow (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow \\ & (k1_seq_1 X0 X2 = k1_real_1 (k1_seq_1 X1 X2)))) \end{aligned} \tag{2}$$

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.

$$\forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1)\wedge(v3_membered X1))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow((v1_funct_1 (k30_valued_1 X2))\wedge(v1_partfun1 (k30_valued_1 X2) X0))) \quad (4)$$

Assume the following.

$$v3_membered k1_numbers \quad (5)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (6)$$

Assume the following.

$$\forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k1_numbers)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers))))\Rightarrow((v1_funct_1 (k4_rinf sup1 X0))\wedge((v1_funct_2 (k4_rinf sup1 X0) k5_numbers k1_numbers)\wedge(m1_subset_1 (k4_rinf sup1 X0) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \quad (7)$$

Assume the following.

$$\forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k1_numbers)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers))))\Rightarrow((v1_funct_1 (k3_rinf sup1 X0))\wedge((v1_funct_2 (k3_rinf sup1 X0) k5_numbers k1_numbers)\wedge(m1_subset_1 (k3_rinf sup1 X0) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3_membered X1)\wedge((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((v1_funct_1 (k32_valued_1 X0 X1 X2))\wedge(m1_subset_1 (k32_valued_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v1_partfun1 X2 X0)\Rightarrow(v1_funct_2 X2 X0 X1)) \quad (10)$$

Theorem 1

$$\forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k1_numbers)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers))))\Rightarrow((v2_seq_2 X0)\Rightarrow(r2_funct_2 k5_numbers k1_numbers (k3_rinf sup1 X0) (k32_valued_1 k5_numbers k1_numbers (k4_rinf sup1 (k32_valued_1 k5_numbers k1_numbers X0))))))$$