

t31_rinfsup1

(TMWcdM7QTqrZt3y8T1BkCgNTJq3Wb2uyJuw)

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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 $v1_seq_2 : \iota \Rightarrow o$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_xxreal_2 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k4_measure6 : \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k1_binop_2 : \iota \Rightarrow \iota$ be given. Let $k5_member_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $m1_xxreal_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 k1_numbers)) \Rightarrow ((X0 \in X1) \Leftrightarrow (k4_xcmplx_0 X0 \in k4_measure6 X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. (v1_membered X0) \Rightarrow (\forall X1. (v1_xcmplx_0 X1) \Rightarrow ((X1 \in X0) \Leftrightarrow (k1_binop_2 X1 \in k5_member_1 X0))) \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (k4_measure6 X0 = k5_member_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k1_real_1 X0 = k4_xcmplx_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k1_binop_2 X0 = k4_xcmplx_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (k4_measure6 (k4_measure6 X0) = X0) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k1_real_1 (k1_real_1 X0) = X0) \quad (10)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow ((v1_membered (k5_member_1 X0)) \wedge (v3_membered (k5_member_1 X0))) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((v1_xcmplx_0 (k4_xcmplx_0 X0)) \wedge (v1_xreal_0 (k4_xcmplx_0 X0))) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (m1_subset_1 (k4_measure6 X0) (k1_zfmisc_1 k1_numbers)) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))) \Rightarrow \\ & ((v1_seq_2 X0) \Leftrightarrow (\exists X1.(v1_xreal_0 X1) \wedge (\forall X2.(m2_subset_1 \\ & X2 k1_numbers k5_numbers) \Rightarrow (\neg r1_xreal_0 X1 (k1_seq_1 X0 X2)))))) \end{aligned} \quad (14)$$

Assume the following.

$$k1_xxreal_0 = k1_numbers \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ & m1_xxreal_2 X1 X0) \Leftrightarrow (\forall X2.(v1_xxreal_0 X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0 \\ & X2 X1)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow((v4_xxreal_2\ X0)\Leftrightarrow(\exists X1.(v1_xreal_0\ X1)\wedge(m1_xxreal_2\ X1\ X0))) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0)\wedge(v1_xxreal_0\ X1))\Rightarrow((r1_xxreal_0\ X0\ X1)\vee(r1_xxreal_0\ X1\ X0)) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers))\Rightarrow(v3_membered\ X0) \quad (19)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (20)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (21)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xreal_0\ X0) \quad (22)$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xxreal_0\ X1)) \quad (23)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1\ X0)\wedge((v1_funct_2\ X0\ k5_numbers\ k1_numbers)\wedge \\ & (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k1_numbers))))))\Rightarrow \\ & ((v1_seq_2\ X0)\Rightarrow(\forall X1.(m2_subset_1\ X1\ k1_numbers\ k5_numbers)\Rightarrow \\ & (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ k1_numbers))\Rightarrow((X2 = \\ & ReplSep\ (toset\ (\lambda X3 : \iota.m2_subset_1\ X3\ k1_numbers\ k5_numbers)) \\ & (\lambda X3 : \iota.r1_xreal_0\ X1\ X3)\ (\lambda X3 : \iota.k1_seq_1\ X0\ X3))\Rightarrow \\ & (v4_xxreal_2\ X2)))))) \end{aligned}$$