

t86_rinfsup1

(TMTwA3cDn9watpeciHNDWc8mUD1zJLRrK8z)

October 27, 2020

Let $v1_xreal_0 : \iota \Rightarrow o$ 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 $k1_numbers : \iota$ 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 $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $k5_rinfsup1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ 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 $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 \\
 & X1 k5_numbers k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & k5_numbers k1_numbers)))))) \Rightarrow ((v1_comseq_2 X1) \Rightarrow ((r1_xxreal_0 \\
 & (k5_rinfsup1 X1) X0) \Leftrightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 \\
 & X2 k6_numbers) \wedge (\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \\
 & (\exists X4.(m2_subset_1 X4 k1_numbers k5_numbers) \wedge (r1_xxreal_0 \\
 & (k2_xcmplx_0 X0 X2) (k1_seq_1 X1 (k2_nat_1 X3 X4))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 \\
 & X1 k5_numbers k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & k5_numbers k1_numbers)))))) \Rightarrow ((v1_comseq_2 X1) \Rightarrow ((r1_xxreal_0 \\
 & X0 (k5_rinfsup1 X1) \Leftrightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow ((\neg r1_xxreal_0 \\
 & X2 k6_numbers) \Rightarrow (\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \\
 & (\neg \forall X4.(m2_subset_1 X4 k1_numbers k5_numbers) \Rightarrow (r1_xxreal_0 \\
 & (k1_seq_1 X1 (k2_nat_1 X3 X4) (k6_xcmplx_0 X0 X2))))))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(r1_xxreal_0 X0 X0) \quad (4)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} &\forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k1_numbers)\wedge \\ &(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers))))))\Rightarrow \\ &(m1_subset_1 (k5_rinfsup1 X0) k1_numbers) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (8)$$

Theorem 1

$$\begin{aligned} &\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge((v1_funct_2 \\ &X1 k5_numbers k1_numbers)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ &k5_numbers k1_numbers))))))\Rightarrow((v1_comseq_2 X1)\Rightarrow((X0 = k5_rinfsup1 \\ &X1)\Leftrightarrow(\forall X2.(v1_xreal_0 X2)\Rightarrow((\neg r1_xxreal_0 X2 k6_numbers)\Rightarrow \\ &((\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers)\Rightarrow(\neg\forall X4. \\ &(m2_subset_1 X4 k1_numbers k5_numbers)\Rightarrow(r1_xxreal_0 (k1_seq_1 \\ &X1 (k2_nat_1 X3 X4)) (k6_xcmplx_0 X0 X2))))))\wedge(\exists X3.(m2_subset_1 \\ &X3 k1_numbers k5_numbers)\wedge(\forall X4.(m2_subset_1 X4 k1_numbers \\ &k5_numbers)\Rightarrow(\neg r1_xxreal_0 (k2_xcmplx_0 X0 X2) (k1_seq_1 X1 (k2_nat_1 \\ &X3 X4)))))))))) \end{aligned}$$