

t24_rinfsup2 (TMGFNQg- MznU5e1s4kb4zsusHXGZjBQVpn3e)

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 $k7_numbers : \iota$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_rinfsup2 : \iota \Rightarrow \iota$ be given. Let $k1_rinfsup2 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k12_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow \\ & (r1_xxreal_0 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k7_numbers) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k7_numbers)))))) \Rightarrow ((r1_xxreal_0 \\ & (k2_rinfsup2 X1) (k12_supinf_2 X1 X0)) \wedge (r1_xxreal_0 (k12_supinf_2 \\ & X1 X0) (k1_rinfsup2 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v2_valued_0 X0))) \Rightarrow (k12_supinf_2 X0 X1 = k1_funct_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v2_valued_0 X0))) \Rightarrow (v1_xxreal_0 (k1_funct_1 X0 X1)) \quad (4)$$

Assume the following.

$$v2_membered k7_numbers \quad (5)$$

Assume the following.

$$m2_subset_1 \ k6_numbers \ k1_numbers \ k5_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k7_numbers) \wedge \\ (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k7_numbers)))))) \Rightarrow \\ (m1_subset_1 \ (k2_rinf sup2 \ X0) \ k7_numbers) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k7_numbers) \wedge \\ (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k7_numbers)))))) \Rightarrow \\ (m1_subset_1 \ (k1_rinf sup2 \ X0) \ k7_numbers) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k7_numbers) \Rightarrow (v1_xreal_0 \ X0) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \\ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v1_relat_1 \ X2) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (v2_membered \ X1) \Rightarrow (\forall X2. (m1_subset_1 \\ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1)))) \Rightarrow (v2_valued_0 \ X2) \end{aligned} \quad (11)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k7_numbers) \wedge \\ (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k7_numbers)))))) \Rightarrow \\ (r1_xreal_0 \ (k2_rinf sup2 \ X0) \ (k1_rinf sup2 \ X0)) \end{aligned}$$