

t24_extreal2 (TMRCKAn- rqHM2QZogJbNAK9nc2zuuHUtZTVn)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_numbers : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_extreal1 : \iota \Rightarrow \iota$ be given. Let $k4_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k2_xxreal_3 : \iota \Rightarrow \iota$ be given. Let $k3_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_supinf_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_xxreal_0 (k2_xxreal_3 X1) (k2_xxreal_3 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((k2_xxreal_3 (k3_xxreal_3 X0 X1) = k1_xxreal_3 (k2_xxreal_3 X0 X1)) \wedge (k2_xxreal_3 (k3_xxreal_3 X0 X1) = k3_xxreal_3 X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers) \Rightarrow (\forall X1.(m1_subset_1 X1 k7_numbers) \Rightarrow (((m1_subset_1 X0 k1_numbers) \vee (m1_subset_1 X1 k1_numbers)) \Rightarrow (r1_xxreal_0 (k4_supinf_2 (k3_extreal1 X0) (k3_extreal1 X1)) (k3_extreal1 (k4_supinf_2 X0 X1)))))) \quad (3)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers) \Rightarrow (k3_extreal1 X0 = k3_extreal1 (k2_supinf_2 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers) \Rightarrow (\forall X1.(m1_subset_1 X1 k7_numbers) \Rightarrow (((r1_xxreal_0 (k2_supinf_2 X0) X1) \wedge (r1_xxreal_0 X1 X0)) \Leftrightarrow (r1_xxreal_0 (k3_extreal1 X1) X0))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k7_numbers)\wedge(m1_subset_1 X1 k7_numbers))\Rightarrow(k4_supinf_2 X0 X1 = k3_xxreal_3 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers)\Rightarrow(k2_supinf_2 X0 = k2_xxreal_3 X0) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(k2_xxreal_3 (k2_xxreal_3 X0) = X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k7_numbers)\wedge(m1_subset_1 X1 k7_numbers))\Rightarrow(m1_subset_1 (k4_supinf_2 X0 X1) k7_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers)\Rightarrow(m1_subset_1 (k3_extreal1 X0) k7_numbers) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(v1_xxreal_0 (k2_xxreal_3 X0)) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers)\Rightarrow(v1_xxreal_0 X0) \quad (12)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k7_numbers)\Rightarrow(\forall X1.(m1_subset_1 X1 k7_numbers)\Rightarrow(((m1_subset_1 X0 k1_numbers)\vee(m1_subset_1 X1 k1_numbers))\Rightarrow(r1_xxreal_0 (k3_extreal1 (k4_supinf_2 (k3_extreal1 X0) (k3_extreal1 X1))) (k3_extreal1 (k4_supinf_2 X0 X1))))))$$