

t30_extreal2 (TMX-
ERR7NnqmaosXyh4z9pPTkrtHYVbKLjhh)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_supinf_1 : \iota$ be given. Let $k3_extreal1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k2_supinf_1 : \iota$ be given. Let $k2_xxreal_0 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow ((r1_xxreal_0 k1_xxreal_0 X0) \Rightarrow (X0 = k1_xxreal_0)) \quad (1)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers) \Rightarrow (\neg(k3_extreal1 X0 = k1_supinf_1) \wedge ((X0 \neq k1_supinf_1) \wedge (X0 \neq k2_supinf_1))) \quad (2)$$

Assume the following.

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

Assume the following.

$$(k3_extreal1 k1_supinf_1 = k1_supinf_1) \wedge (k3_extreal1 k2_supinf_1 = k1_supinf_1) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\neg(\neg X0 \in k1_numbers) \wedge ((X0 \neq k1_xxreal_0) \wedge (X0 \neq k2_xxreal_0))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \quad (6)$$

Assume the following.

$$k2_supinf_1 = k2_xxreal_0 \quad (7)$$

Assume the following.

$$k1_supinf_1 = k1_xxreal_0 \quad (8)$$

Assume the following.

$$\neg v1_xxreal_0 \ k1_xxreal_0 \quad (9)$$

Assume the following.

$$v1_xxreal_0 \ k1_xxreal_0 \quad (10)$$

Assume the following.

$$\neg v1_xxreal_0 \ k2_xxreal_0 \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k7_numbers) \Rightarrow (m1_subset_1 \ (k3_extreal1 \ X0) \ k7_numbers) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k7_numbers) \Rightarrow (v1_xxreal_0 \ X0) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xxreal_0 \ X0) \quad (14)$$

Theorem 1

$$\forall X0.(m1_subset_1 \ X0 \ k7_numbers) \Rightarrow ((\neg r1_xxreal_0 \ k1_supinf_1 \ (k3_extreal1 \ X0)) \Leftrightarrow (X0 \in k1_numbers))$$