

t18\_extreal2  
(TMX7bKHYt9tfRps5XZLY2VJX994uhKRoSzi)

October 27, 2020

Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_numbers : \iota$  be given. Let  $k3\_extreal1 : \iota \Rightarrow \iota$  be given. Let  $k2\_supinf\_2 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k7\_numbers) \Rightarrow ((r1\_xxreal\_0 (k2\_supinf\_2 (k3\_extreal1 X0)) X0) \wedge (r1\_xxreal\_0 X0 (k3\_extreal1 X0))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k7\_numbers) \Rightarrow ((k3\_extreal1 X0 = X0) \vee (k3\_extreal1 X0 = k2\_supinf\_2 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (4)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k7\_numbers) \Rightarrow (k3\_extreal1 (k3\_extreal1 X0) = k3\_extreal1 X0) \quad (5)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k7\_numbers) \Rightarrow (k2\_supinf\_2 (k2\_supinf\_2 X0) = X0) \quad (6)$$

Assume the following.

$$\neg v1\_xboole\_0 k7\_numbers \quad (7)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k7\_numbers) \Rightarrow (m1\_subset\_1 (k2\_supinf\_2 X0) k7\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Leftrightarrow (X0 \in k7\_numbers) \quad (9)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k7\_numbers) \Rightarrow (k3\_extreal1 X0 = k3\_extreal1 (k2\_supinf\_2 X0))$$