

t32_topreal1
(TMNcq92rzFzNrQc1b5DRdKTtZ9eBNyEAvs4)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k5_topreal1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (\forall X2. (X2 \in X0) \Leftrightarrow (X2 \in X1)) \Rightarrow (X0 = X1) \quad (2)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (m1_subset_1 (k5_topreal1 X0) (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((X1 = k5_topreal1 X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 \\ & (u1_struct_0 (k15_euclid np_2))) \Rightarrow ((X2 \in X1) \Leftrightarrow ((r1_xxreal_0 (k17_euclid X0) (k17_euclid X2)) \wedge (k18_euclid X2 = k18_euclid X0)))))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (k5_topreal1 X0 = ReplSep (toset (\lambda X1 : \iota. m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid np_2)))) (\lambda X1 : \iota. (r1_xxreal_0 (k17_euclid \\ & X0) (k17_euclid X1)) \wedge (k18_euclid X1 = k18_euclid X0)) (\lambda X1 : \\ & \iota. X1)) \end{aligned}$$