

t30_topreal1
(TMQKmp4mdua5z11SvrBKjkbGf5oSVSDR)

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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 $k4_topreal1 : \iota \Rightarrow \iota$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. (X2 \in X1) \Rightarrow (X2 \in X0)) \quad (2)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (m1_subset_1 (k4_topreal1 X0) (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((X1 = k4_topreal1 X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 \\ & (u1_struct_0 (k15_euclid np_2))) \Rightarrow ((X2 \in X1) \Leftrightarrow ((k17_euclid X2 = k17_euclid X0) \wedge (r1_xxreal_0 (k18_euclid X0) (k18_euclid X2))))))) \quad (4) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (k4_topreal1 X0 = ReplSep (toset (\lambda X1 : \iota. m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid np_2)))) (\lambda X1 : \iota. (k17_euclid X1 = k17_euclid \\ & X0) \wedge (r1_xxreal_0 (k18_euclid X0) (k18_euclid X1))) (\lambda X1 : \iota. \\ & X1)) \end{aligned}$$