

t28_topreal4 (TM-
RGWH4AyGh85wNNU5pByTdS4DsXKATKcxg)

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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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v2_topreal4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_topreal4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
 & np_2)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\
 & (k15_euclid np_2)))) \Rightarrow (((v2_topreal4 X1 (k15_euclid np_2)) \wedge \\
 & ((X0 \in X1) \wedge (X2 = ReplSep (toset (\lambda X3 : \iota.m1_subset_1 X3 (u1_struct_0 \\
 & (k15_euclid np_2)))) (\lambda X3 : \iota.\neg(X3 \neq X0) \wedge (\forall X4.(m1_subset_1 \\
 & X4 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\neg(r1_topreal4 \\
 & X4 X0 X3) \wedge (r1_tarski X4 X1)))) (\lambda X3 : \iota.X3)))) \Rightarrow (r1_tarski \\
 & X1 X2))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
 & np_2)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\
 & (k15_euclid np_2)))) \Rightarrow (((X0 \in X1) \wedge (X2 = ReplSep (toset (\lambda X3 : \\
 & \iota.m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))) (\lambda X3 : \\
 & \iota.\neg(X3 \neq X0) \wedge (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 \\
 & (k15_euclid np_2)))) \Rightarrow (\neg(r1_topreal4 X4 X0 X3) \wedge (r1_tarski X4 \\
 & X1)))) (\lambda X3 : \iota.X3)))) \Rightarrow (r1_tarski X2 X1))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (r1_tarski X1 X0)) \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & np_2)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid np_2)))) \Rightarrow (((v2_topreal4 X1 (k15_euclid np_2)) \wedge \\ & ((X0 \in X1) \wedge (X2 = ReplSep (toset (\lambda X3 : \iota.m1_subset_1 X3 (u1_struct_0 \\ & (k15_euclid np_2)))) (\lambda X3 : \iota.\neg(X3 \neq X0) \wedge (\forall X4.(m1_subset_1 \\ & X4 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\neg(r1_topreal4 \\ & X4 X0 X3) \wedge (r1_tarski X4 X1)))) (\lambda X3 : \iota.X3)))) \Rightarrow (X1 = X2)))) \end{aligned}$$