

t89_topreal6
(TMLFp3HndpiWheEYRrFunNF9bg7ZTyqbtZu)

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Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $v9_rltopsp1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. k4_xboole_0 X0 (k4_xboole_0 X0 X1) = k3_xboole_0 X0 X1 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski (k4_xboole_0 X0 X1) X0 \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & X0)))) \Rightarrow (((v9_rltopsp1 X2 (k15_euclid X0)) \wedge (r1_tarski X1 X2)) \Rightarrow \\ & (v9_rltopsp1 X1 (k15_euclid X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (m1_subset_1 (k9_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & X0)))) \Rightarrow (((v9_rltopsp1 X1 (k15_euclid X0)) \vee (v9_rltopsp1 X2 (k15_euclid \\ & X0))) \Rightarrow (v9_rltopsp1 (k9_subset_1 (u1_struct_0 (k15_euclid X0)) \\ & X1 X2) (k15_euclid X0)))))) \end{aligned}$$