

t14_topmetr3
(TMH1jPcg3f4kYonSsXnJR5y7Lmvsar8PC62)

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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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & \quad X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow \\ & \quad (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\\ & \quad \quad \forall X4.(m1_subset_1 X4 (u1_struct_0 (k15_euclid X0))) \Rightarrow ((\\ & (r1_topreal1 (k15_euclid X0) X3 X4 X1) \wedge ((r1_topreal1 (k15_euclid \\ & \quad X0) X3 X4 X2) \wedge (r1_tarski X1 X2)))) \Rightarrow (X1 = X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & \quad X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X3.(\\ & \quad m1_subset_1 X3 (u1_struct_0 (k15_euclid X0))) \Rightarrow ((r1_topreal1 \\ & (k15_euclid X0) X2 X3 X1) \Rightarrow (r1_topreal1 (k15_euclid X0) X3 X2 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & \quad X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (5)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)) \Rightarrow (v1_xboole_0 \ X1)) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 \ X0 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X1. \\ & (m1_subset_1 \ X1 \ (u1_struct_0 \ (k15_euclid \ X0))) \Rightarrow (\forall X2.(\\ & m1_subset_1 \ X2 \ (u1_struct_0 \ (k15_euclid \ X0))) \Rightarrow (\forall X3.((\\ & \neg v1_xboole_0 \ X3) \wedge (m1_subset_1 \ X3 \ (k1_zfmisc_1 \ (u1_struct_0 \ (\\ & k15_euclid \ X0)))))) \Rightarrow (\forall X4.((\neg v1_xboole_0 \ X4) \wedge (m1_subset_1 \\ & X4 \ (k1_zfmisc_1 \ (u1_struct_0 \ (k15_euclid \ X0)))))) \Rightarrow (((r1_topreal1 \\ & (k15_euclid \ X0) \ X1 \ X2 \ X3) \wedge ((r1_topreal1 \ (k15_euclid \ X0) \ X2 \ X1 \ X4) \wedge \\ & (r1_tarski \ X4 \ X3))) \Rightarrow (X4 = X3)))))) \end{aligned}$$