

t51_euclid_7 (TMU-
VpqVca6HwgYpmdgXQkZ8vFzZNGx4NFhg)

October 27, 2020

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 $k1_rusub_4 : \iota \Rightarrow \iota$ be given. Let $k7_real_ns1 : \iota \Rightarrow \iota$ be given. Let $m1_rusub_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_euclid_7 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v2_finseq_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $v1_bhsp_1 : \iota \Rightarrow o$ be given. Let $v2_bhsp_1 : \iota \Rightarrow o$ be given. Let $v1_rusub_4 : \iota \Rightarrow o$ be given. Let $l1_bhsp_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (m1_rusub_3 (k8_euclid_7 X0) (k7_real_ns1 X0)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\exists X0.(v1_relat_1 X0) \wedge ((v2_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_finset_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v2_finseq_1 X0))))))) \quad (4)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((v1_finset_1 (k8_euclid_7 X0)) \wedge (k1_card_1 (k8_euclid_7 X0) = X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow & ((\neg v2_struct_0 (k7_real_ns1 X0)) \wedge \\ & ((v13_algstr_0 (k7_real_ns1 X0)) \wedge ((v2_rlvect_1 (k7_real_ns1 \\ X0)) \wedge ((v3_rlvect_1 (k7_real_ns1 X0)) \wedge ((v4_rlvect_1 (k7_real_ns1 \\ X0)) \wedge ((v5_rlvect_1 (k7_real_ns1 X0)) \wedge ((v6_rlvect_1 (k7_real_ns1 \\ X0)) \wedge ((v7_rlvect_1 (k7_real_ns1 X0)) \wedge ((v8_rlvect_1 (k7_real_ns1 \\ X0)) \wedge ((v1_bhsp_1 (k7_real_ns1 X0)) \wedge (v2_bhsp_1 (k7_real_ns1 \\ X0))))))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow ((\neg v2_struct_0 (k7_real_ns1 X0)) \wedge ((v1_bhsp_1 (k7_real_ns1 X0)) \wedge (v1_rusub_4 (k7_real_ns1 X0)))) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k7_real_ns1 X0)) \wedge ((v1_bhsp_1 (k7_real_ns1 X0)) \wedge (l1_bhsp_1 (k7_real_ns1 X0)))) \quad (8)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0. & ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (m1_subset_1 (k1_rusub_4 X0) k5_numbers) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0. & ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\ X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow ((v1_rusub_4 X0) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 k5_numbers) \Rightarrow ((X1 = k1_rusub_4 X0) \Leftrightarrow (\forall X2. \\ (m1_rusub_3 X2 X0) \Rightarrow (X1 = k1_card_1 X2)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 \\ X1 X0)) \Rightarrow ((v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ X0)) \Rightarrow (v1_xboole_0 X1)) \end{aligned} \quad (14)$$

Theorem 1

$$\begin{aligned} \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (k1_rusub_4 \\ (k7_real_ns1 X0) = X0) \end{aligned}$$