

t18_euclid_7
(TMJC36kUGuL22CaUopoKLSjooTSiKicvJks)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v5_euclid_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_euclid : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $np_1 : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k5_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_euclid : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_euclid_7 : \iota \Rightarrow o$ be given. Let $v3_euclid_7 : \iota \Rightarrow o$ be given. Let $v4_euclid_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_euclid_7 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v3_valued_0 X0)))) \Rightarrow (k23_rvsum_1 X0 (k5_euclid (k3_finseq_1 X0)) = k6_numbers) \quad (1)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v3_valued_0 X0)))) \Rightarrow ((k23_rvsum_1 X0 X0 = k6_numbers) \Leftrightarrow (k12_euclid X0 = k6_numbers)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1)\Rightarrow((v1_xboole_0 X1)\vee (X0 \in X1)) \quad (5)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (6)$$

Assume the following.

$$\neg v1_xboole_0 np_1 \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((v7_ordinal1 X1)\wedge(m1_subset_1 X2 X0)))\Rightarrow(k5_finseq_2 X0 X1 X2 = k2_finseq_2 X1 X2) \quad (10)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k5_euclid X0 = k4_euclid X0) \quad (11)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (12)$$

Assume the following.

$$\forall X0.\exists X1.(m1_finseq_1 X1 X0)\wedge((v1_relat_1 X1)\wedge((v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 X0)\wedge((v1_funct_1 X1)\wedge((v1_xboole_0 X1)\wedge((v1_finset_1 X1)\wedge(v1_finseq_1 X1))))))) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow (k3_finseq_1 (k3_finseq_1 X0) = k3_finseq_1 X0) \quad (14)$$

Assume the following.

$$\forall X0.k1_card_1 (k1_card_1 X0) = k1_card_1 X0 \quad (15)$$

Assume the following.

$$\neg v1_finset_1 k4_ordinal1 \quad (16)$$

Assume the following.

$$v6_membered\ k4_ordinal1 \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(v7_ordinal1\ X0)\Rightarrow((v1_relat.1\ (k2_finseq_2 \\ X0\ X1))\wedge((v1_funct.1\ (k2_finseq_2\ X0\ X1))\wedge((v3_card.1\ (k2_finseq_2 \\ X0\ X1)\ X0)\wedge(v1_finseq.1\ (k2_finseq_2\ X0\ X1)))))) \end{aligned} \quad (18)$$

Assume the following.

$$v1_xboole.0\ k1_xboole.0 \quad (19)$$

Assume the following.

$$\neg v1_xboole.0\ k1_numbers \quad (20)$$

Assume the following.

$$\forall X0.(v1_xboole.0\ X0)\Rightarrow((v1_xboole.0\ (k1_card.1\ X0))\wedge(v1_card.1\ (k1_card.1\ X0))) \quad (21)$$

Assume the following.

$$\forall X0.\exists X1.m1_subset.1\ X1\ X0 \quad (22)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole.0\ X0)\wedge((\neg v1_xboole.0\ X1)\wedge \\ (m1_subset.1\ X1\ (k1_zfmisc.1\ X0))))\Rightarrow(\forall X2.(m2_subset.1 \\ X2\ X0\ X1)\Rightarrow(m1_subset.1\ X2\ X0)) \end{aligned} \quad (23)$$

Assume the following.

$$m2_subset.1\ k6_numbers\ k1_numbers\ k5_numbers \quad (24)$$

Assume the following.

$$m1_subset.1\ k5_numbers\ (k1_zfmisc.1\ k1_numbers) \quad (25)$$

Assume the following.

$$\begin{aligned} \forall X0.(v2_euclid.7\ X0)\Leftrightarrow(\forall X1.((v1_relat.1\ X1)\wedge((\\ v1_funct.1\ X1)\wedge((v1_finseq.1\ X1)\wedge(v3_valued.0\ X1))))\Rightarrow((X1 \in \\ X0)\Rightarrow(k12_euclid\ X1 = np.1))) \end{aligned} \quad (26)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(k4_euclid\ X0 = k5_finseq.2\ k1_numbers\ X0\ k6_numbers) \quad (27)$$

Assume the following.

$$\forall X0.(v3_card.1\ X0\ k1_xboole.0)\Rightarrow(v1_xboole.0\ X0) \quad (28)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_euclid\ X0)))\Rightarrow((v5_euclid_7\ X1\ X0)\Rightarrow((v3_euclid_7\ X1)\wedge(v4_euclid_7\ X1\ X0)))) \quad (29)$$

Assume the following.

$$\forall X0.(v3_euclid_7\ X0)\Rightarrow((v1_euclid_7\ X0)\wedge(v2_euclid_7\ X0)) \quad (30)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v5_relat_1\ X0\ k1_numbers))\Rightarrow((v1_relat_1\ X0)\wedge(v3_valued_0\ X0)) \quad (31)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(v1_xboole_0\ X1)) \quad (32)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(v1_relat_1\ X0) \quad (33)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(v1_finset_1\ X0) \quad (34)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_euclid\ X0))\Rightarrow(v3_card_1\ X1\ X0)) \quad (35)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v7_ordinal1\ X1)) \quad (36)$$

Theorem 1

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ (k1_euclid\ k6_numbers)))\Rightarrow((v5_euclid_7\ X0\ k6_numbers)\Rightarrow(X0 = k1_xboole_0))$$