

t53_euclid_8 (TMW- CATF6GCsZKb81TnizwuG27bg3EQtc1mp)

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Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k6_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_euclid_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_binop_2 : \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m2_finseq_2 X0 k1_numbers (k1_euclid np_3)) \Rightarrow (X0 = k1_euclid_8 (k1_seq_1 X0 np_1) (k1_seq_1 X0 np_2) (k1_seq_1 X0 np_3)) \quad (1)$$

Assume the following.

$$((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

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

Assume the following.

$$\forall X0.(m2_finseq_2 X0 k1_numbers (k1_euclid np_3)) \Rightarrow ((k1_seq_1 (k6_euclid np_3 X0) np_1 = k7_binop_2 (k1_seq_1 X0 np_1)) \wedge ((k1_seq_1 (k6_euclid np_3 X0) np_2 = k7_binop_2 (k1_seq_1 X0 np_2)) \wedge (k1_seq_1 (k6_euclid np_3 X0) np_3 = k7_binop_2 (k1_seq_1 X0 np_3)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ (k1_euclid\ X0)))\Rightarrow(m2_finseq_2\ (k6_euclid\ X0\ X1)\ k1_numbers\ (k1_euclid\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(m1_finseq_2\ (k1_euclid\ X0)\ k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (8)$$

Theorem 1

$$\forall X0.(m2_finseq_2\ X0\ k1_numbers\ (k1_euclid\ np_3))\Rightarrow(k6_euclid\ np_3\ X0 = k1_euclid_8\ (k7_binop_2\ (k1_seq_1\ X0\ np_1))\ (k7_binop_2\ (k1_seq_1\ X0\ np_2))\ (k7_binop_2\ (k1_seq_1\ X0\ np_3)))$$