

t51_euclid
(TMafBgbrspNsq3xiKhLYD3AG5FaxAt1PCkF)

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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 $np_2 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ 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 $k4_ordinal1 : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (k4_finseq_2 np_2 X0 = ReplSep2 \\ (toset (\lambda X1 : \iota. m1_subset_1 X1 X0)) (\lambda X1 : \iota. toset (\lambda X2 : \\ \iota. m1_subset_1 X2 X0)) (\lambda X1 : \iota. \lambda X2 : \iota. True) (\lambda X1 : \\ \iota. \lambda X2 : \iota. k10_finseq_1 X1 X2)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (u1_struct_0 (k15_euclid X0) = k1_euclid X0) \quad (3)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (X1 \in k4_finseq_2 np_2 X0) \Leftrightarrow (\exists X2. \\ \exists X3. (X2 \in X0) \wedge ((X3 \in X0) \wedge (X1 = k10_finseq_1 X2 X3))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(\neg v1_xboole_0 X1))\Rightarrow (\neg v1_xboole_0 (k4_finseq_2 X0 X1)) \quad (8)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k1_euclid X0 = k4_finseq_2 X0 k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (11)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow (\exists X1.(m1_subset_1 X1 k1_numbers)\wedge(\exists X2.(m1_subset_1 X2 k1_numbers)\wedge(X0 = k10_finseq_1 X1 X2)))$$