

t51_euclid_2
(TMQr8La3EosXA7a5R4qF8JMiLzveuQghaqv)

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Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ 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 $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v4_funct_1 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (u1_struct_0 (k15_euclid X0) = k1_euclid X0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 \\ X0) \wedge (v3_valued_0 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 \\ X1) \wedge ((v1_finseq_1 X1) \wedge (v3_valued_0 X1)))) \Rightarrow ((k3_finseq_1 X0 = \\ k3_finseq_1 X1) \Rightarrow (r1_xxreal_0 (k18_complex1 (k23_rvsum_1 X0 X1)) \\ (k11_binop_2 (k12_euclid X0) (k12_euclid X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (3)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v4_funct_1 (u1_struct_0 (k15_euclid X0))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(v3_card_1 X1 X0) \Leftrightarrow (k1_card_1 X1 = X0) \quad (5)$$

Assume the following.

$$\forall X0.(v4_funct_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 X1))) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k15_euclid\ X0))) \Rightarrow (v3_card_1\ X1\ X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k15_euclid\ X0))) \Rightarrow (v3_valued_0\ X1)) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k15_euclid\ X0))) \Rightarrow (v1_finseq_1\ X1)) \quad (9)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k15_euclid\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ (k15_euclid\ X0))) \Rightarrow (r1_xxreal_0\ (k18_complex1\ (k23_rvsum_1\ X1\ X2))\ (k11_binop_2\ (k12_euclid\ X1)\ (k12_euclid\ X2)))))$$