

t46_euclid_2

(TMdUJHttj6SyFJ2wZbj4mW5ArAFbyGuLngv)

October 27, 2020

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 $k5_square_1 : \iota \Rightarrow \iota$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ 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 $k8_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow (m2_finseq_1 X1 k1_numbers)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v3_valued_0 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (v3_valued_0 X1)))) \Rightarrow ((k3_finseq_1 X0 = k3_finseq_1 X1) \Rightarrow (k5_square_1 (k12_euclid (k8_rvsum_1 X0 X1)) = k9_binop_2 (k10_binop_2 (k5_square_1 (k12_euclid X0)) (k11_binop_2 np_2 (k23_rvsum_1 X1 X0))) (k5_square_1 (k12_euclid X1)))))) \quad (2) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v7_ordinal1 \\ & X0)\wedge((m1_subset_1 X1 (u1_struct_0 (k15_euclid X0)))\wedge((m1_subset_1 \\ & X2 (u1_struct_0 (k15_euclid X0)))\wedge(((v1_relat_1 X3)\wedge((v1_funct_1 \\ & X3)\wedge((v1_finseq_1 X3)\wedge(v3_valued_0 X3))))\wedge((v1_relat_1 X4)\wedge \\ & ((v1_funct_1 X4)\wedge((v1_finseq_1 X4)\wedge(v3_valued_0 X4))))))\Rightarrow \\ & (((X1 = X3)\wedge(X2 = X4))\Rightarrow(k5_algstr_0 (k15_euclid X0) X1 X2 = k8_rvsum_1 \\ & X3 X4)) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge(\\ & (v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & X0)))) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(\\ & (v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(v3_card_1 X1 X0)\Leftrightarrow(k1_card_1 X1 = X0) \tag{8}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid X0)))\Rightarrow(v3_card_1 X1 X0)) \end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid X0)))\Rightarrow(v3_valued_0 X1)) \end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid X0)))\Rightarrow(v1_finseq_1 X1)) \end{aligned} \tag{11}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid X0)))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 (\\ & k15_euclid X0)))\Rightarrow(k5_square_1 (k12_euclid (k5_algstr_0 (k15_euclid \\ & X0) X1 X2)) = k9_binop_2 (k10_binop_2 (k5_square_1 (k12_euclid \\ & X1)) (k11_binop_2 np_2 (k23_rvsum_1 X2 X1))) (k5_square_1 (k12_euclid \\ & X2)))))) \end{aligned}$$