

t43_euclid_2

(TMUkFHjsb1ECX2gm1bEeUkeE6E3G1rcq2Zk)

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 $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k22_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v2_monoid_0 : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_monoid_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid X0))) \Rightarrow ((k23_rvsum_1 X1 X1 = k6_numbers) \Leftrightarrow (X1 = k4_struct_0 \\ (k15_euclid X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid X0))) \Rightarrow (r1_xxreal_0 k6_numbers (k23_rvsum_1 X1 X1))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ (r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1))) \quad (4)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v3_valued_0 X0)\wedge(v1_finseq_1 X0))))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v3_valued_0 X1)\wedge(v1_finseq_1 X1))))\Rightarrow(k23_rvsum_1 X0 X1 = k22_rvsum_1 X0 X1)) \quad (6)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0)\wedge((v1_xcmplx_0 X0)\wedge((v1_xxreal_0 X0)\wedge(v1_xreal_0 X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow((v2_monoid_0 (k15_euclid X0))\wedge(v5_rltopsp1 (k15_euclid X0))) \quad (8)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0)\Rightarrow((l1_rlvect_1 X0)\wedge(l1_pre_topc X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v3_valued_0 X0)\wedge(v1_finseq_1 X0))))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v3_valued_0 X1)\wedge(v1_finseq_1 X1))))\Rightarrow(v1_xreal_0 (k22_rvsum_1 X0 X1))) \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow((v5_rltopsp1 (k15_euclid X0))\wedge(l1_rltopsp1 (k15_euclid X0))) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid X0)))\Rightarrow(v3_valued_0 X1)) \quad (14)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow((v2_monoid_0 X0)\Rightarrow(v1_monoid_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k15_euclid\ X0))) \Rightarrow (v1_finseq_1\ X1)) \quad (16)$$

Assume the following.

$$\forall X0.((v1_monoid_0\ X0) \wedge (l1_struct_0\ X0)) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow ((v1_relat_1\ X1) \wedge (v1_funct_1\ X1))) \quad (17)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k15_euclid\ X0))) \Rightarrow ((\neg(X1 \neq k4_struct_0\ (k15_euclid\ X0)) \wedge (r1_xxreal_0\ (k23_rvsum_1\ X1\ X1)\ k6_numbers)) \wedge (\neg(\neg r1_xxreal_0\ (k23_rvsum_1\ X1\ X1)\ k6_numbers)) \wedge (X1 = k4_struct_0\ (k15_euclid\ X0))))$$