

t27_euclid_2

(TMGqd5QVt2TJhyEH9DTXHxuUm5s36Hr4WqH)

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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 $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_monoid_0 : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ 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 $v1_monoid_0 : \iota \Rightarrow o$ be given. Let $g1_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u1_rlvect_1 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (\\ k15_euclid X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\ X0))) \Rightarrow (k23_rvsum_1 (k5_algstr_0 (k15_euclid X0) X1 X2) X3 = k10_binop_2 \\ (k23_rvsum_1 X1 X3) (k23_rvsum_1 X2 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((v2_monoid_0 (k15_euclid X0)) \wedge (v5_rltopsp1 (k15_euclid X0))) \quad (2)$$

Assume the following.

$$\forall X0.(l1_rlvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (3)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l1_pre_topc X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l2_algstr_0 X0)\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(m1_subset_1 (k5_algstr_0 X0 X1 X2) (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow((v5_rltopsp1 (k15_euclid X0))\wedge (l1_rltopsp1 (k15_euclid X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v3_valued_0 X0)\wedge(v1_finseq_1 X0))))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v3_valued_0 X1)\wedge(v1_finseq_1 X1))))\Rightarrow(k23_rvsum_1 X0 X1 = k23_rvsum_1 X1 X0) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid X0)))\Rightarrow(v3_valued_0 X1)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow((v2_monoid_0 X0)\Rightarrow(v1_monoid_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid X0)))\Rightarrow(v1_finseq_1 X1)) \quad (11)$$

Assume the following.

$$\forall X0.((v1_monoid_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1))) \quad (12)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0)\Rightarrow((v5_rltopsp1 X0)\Rightarrow(X0 = g1_rltopsp1 (u1_struct_0 X0) (u2_struct_0 X0) (u1_algstr_0 X0) (u1_rlvect_1 X0) (u1_pre_topc X0))) \quad (13)$$

Theorem 1

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid X0)))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid X0)))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid X0)))\Rightarrow(k23_rvsum_1 X1 (k5_algstr_0 (k15_euclid X0) X2 X3) = k10_binop_2 (k23_rvsum_1 X1 X2) (k23_rvsum_1 X1 X3))))))$$