

t25_euclid_2

(TMSE5bnt6fbbsHwDYiEiUm2S49oJjUdnoEg)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ 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 $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (\\ k15_euclid X0))) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (k23_rvsum_1 (\\ k1_rlvect_1 (k15_euclid X0) X1 X3) X2 = k11_binop_2 X3 (k23_rvsum_1 \\ X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (\\ k15_euclid X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\ X0))) \Rightarrow (k23_rvsum_1 (k3_rlvect_1 (k15_euclid X0) X1 X2) X3 = k9_binop_2 \\ (k23_rvsum_1 X1 X3) (k23_rvsum_1 X2 X3)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k15_euclid X0)) \wedge (v5_rltopsp1 (k15_euclid X0))) \tag{3}$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l1_pre_topc X0)) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_rlvect_1 \\ X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (v1_xreal_0 X2))) \Rightarrow (\\ m1_subset_1 (k1_rlvect_1 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v5_rltopsp1\ (k15_euclid\ X0))\wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v1_xreal_0\ X1)\Rightarrow(\forall X2. \\ & (v1_xreal_0\ X2)\Rightarrow(\forall X3.(m1_subset_1\ X3\ (u1_struct_0\ (k15_euclid \\ & X0)))\Rightarrow(\forall X4.(m1_subset_1\ X4\ (u1_struct_0\ (k15_euclid\ X0)))\Rightarrow \\ & (\forall X5.(m1_subset_1\ X5\ (u1_struct_0\ (k15_euclid\ X0)))\Rightarrow(\\ & k23_rvsum_1\ (k3_rlvect_1\ (k15_euclid\ X0)\ (k1_rlvect_1\ (k15_euclid \\ & X0)\ X3\ X1)\ (k1_rlvect_1\ (k15_euclid\ X0)\ X4\ X2))\ X5 = k9_binop_2\ (k11_binop_2 \\ & X1\ (k23_rvsum_1\ X3\ X5))\ (k11_binop_2\ X2\ (k23_rvsum_1\ X4\ X5)))))) \end{aligned}$$