

t48_euclid

(TMH8yDxBEMc1KGvQpTea3s9gXvQrgVEp7Zo)

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 $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (\\ k15_euclid X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\ X0))) \Rightarrow (k5_algstr_0 (k15_euclid X0) X1 (k5_algstr_0 (k15_euclid \\ X0) X2 X3) = k3_rlvect_1 (k15_euclid X0) (k5_algstr_0 (k15_euclid \\ X0) X1 X2) X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (\\ k15_euclid X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\ X0))) \Rightarrow (k3_rlvect_1 (k15_euclid X0) X1 (k5_algstr_0 (k15_euclid \\ X0) X2 X3) = k5_algstr_0 (k15_euclid X0) (k3_rlvect_1 (k15_euclid \\ X0) X1 X2) X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid X0))) \Rightarrow (k5_algstr_0 (k15_euclid X0) X1 X1 = k4_struct_0 \\ (k15_euclid X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid X0))) \Rightarrow ((k3_rlvect_1 (k15_euclid X0) (k4_struct_0 \\ (k15_euclid X0)) X1 = X1) \wedge (k3_rlvect_1 (k15_euclid X0) X1 (k4_struct_0 \\ (k15_euclid X0)) = X1))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow & (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\ & (k15_euclid\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ (\\ & k15_euclid\ X0))) \Rightarrow ((X1 = k5_algstr_0\ (k15_euclid\ X0)\ (k3_rlvect_1 \\ & (k15_euclid\ X0)\ X1\ X2)\ X2) \wedge (X1 = k3_rlvect_1\ (k15_euclid\ X0)\ (k5_algstr_0 \\ & (k15_euclid\ X0)\ X1\ X2)\ X2)))) \end{aligned}$$