

t26_euclid_5

(TMK2iF8vgvWfjjMYecjBeseVA2z4YRCTg49)

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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 $np_3 : \iota$ be given. Let $k5_euclid_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\ & \quad (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\ & \quad (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\ & \quad (k5_euclid_5 (k3_rlvect_1 (k15_euclid np_3) X0 X1) X2 = k3_rlvect_1 \\ & \quad (k15_euclid np_3) (k5_euclid_5 X0 X2) (k5_euclid_5 X1 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_3))) \Rightarrow \\ & (k5_euclid_5 X0 (k3_rlvect_1 (k15_euclid np_3) X1 X2) = k3_rlvect_1 \\ & (k15_euclid np_3) (k5_euclid_5 X0 X1) (k5_euclid_5 X0 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow ((v2_pre_topc (k15_euclid X0)) \wedge \\ & ((v13_algstr_0 (k15_euclid X0)) \wedge ((v2_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v3_rlvect_1 (k15_euclid X0)) \wedge ((v4_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v5_rlvect_1 (k15_euclid X0)) \wedge ((v6_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v7_rlvect_1 (k15_euclid X0)) \wedge ((v8_rlvect_1 (k15_euclid X0)) \wedge \\ & (v5_rltopsp1 (k15_euclid X0)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_rlvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l1_pre_topc X0)) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1_subset_1 X0 (u1_struct_0 (k15_euclid \\ & np_3))) \wedge (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_3)))) \Rightarrow \\ & (m1_subset_1 (k5_euclid_5 X0 X1) (u1_struct_0 (k15_euclid np_3))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v2_rlvect_1 X0) \wedge (l1_algstr_0 \\ & X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ & X0)))) \Rightarrow (m1_subset_1 (k3_rlvect_1 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v5_rltopsp1\ (k15_euclid\ X0))\wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (13)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v7_ordinal1\ X1)) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ (u1_struct_0\ (k15_euclid\ np_3)))\Rightarrow \\ & (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k15_euclid\ np_3)))\Rightarrow \\ & (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ (k15_euclid\ np_3)))\Rightarrow \\ & (\forall X3.(m1_subset_1\ X3\ (u1_struct_0\ (k15_euclid\ np_3)))\Rightarrow \\ & (k5_euclid_5\ (k3_rlvect_1\ (k15_euclid\ np_3)\ X0\ X1)\ (k3_rlvect_1 \\ & (k15_euclid\ np_3)\ X2\ X3) = k3_rlvect_1\ (k15_euclid\ np_3)\ (k3_rlvect_1 \\ & (k15_euclid\ np_3)\ (k3_rlvect_1\ (k15_euclid\ np_3)\ (k5_euclid_5 \\ & X0\ X2)\ (k5_euclid_5\ X0\ X3))\ (k5_euclid_5\ X1\ X2)\ (k5_euclid_5\ X1 \\ & X3)))))) \end{aligned}$$