

## t29\_euclid\_3

(TMJknxXy5WzbdHy5AVbqs1MvUqmut148N5Z)

October 27, 2020

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  $np\_2 : \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k32\_sin\_cos : \iota$  be given. Let  $k3\_euclid\_3 : \iota \Rightarrow \iota$  be given. Let  $k4\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_euclid\_3 : \iota \Rightarrow \iota$  be given. Let  $k2\_euclid\_3 : \iota \Rightarrow \iota$  be given. Let  $k5\_complex1 : \iota$  be given. Let  $k10\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_comptrig : \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  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  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k2\_numbers : \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  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  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (k1\_euclid\_3 (k2\_euclid\_3 X0) = X0) \quad (1)$$

Assume the following.

$$k1\_euclid\_3 k5\_complex1 = k4\_struct\_0 (k15\_euclid np\_2) \quad (2)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (k2\_euclid\_3 (k4\_algstr\_0 (k15\_euclid np\_2) X0) = k10\_complex1 (k2\_euclid\_3 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow ((X0 \neq k6\_numbers) \Rightarrow (((\neg r1\_xxreal\_0 k32\_sin\_cos (k1\_comptrig X0)) \Rightarrow (k1\_comptrig (k4\_xcmplx\_0 X0) = k7\_real\_1 (k1\_comptrig X0) k32\_sin\_cos)) \wedge ((r1\_xxreal\_0 k32\_sin\_cos (k1\_comptrig X0)) \Rightarrow (k1\_comptrig (k4\_xcmplx\_0 X0) = k9\_real\_1 (k1\_comptrig X0) k32\_sin\_cos)))))) \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_2) \wedge (m2\_subset\_1 \ np\_2 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_2 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_2 \ k1\_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (6)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (7)$$

Assume the following.

$$k5\_complex1 = k1\_xboole\_0 \quad (8)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k2\_numbers) \Rightarrow (k10\_complex1 \ X0 = k4\_xcmplx\_0 \ X0) \quad (9)$$

Assume the following.

$$v6\_membered \ k4\_ordinal1 \quad (10)$$

Assume the following.

$$\forall X0. (l1\_rlvect\_1 \ X0) \Rightarrow (l2\_algstr\_0 \ X0) \quad (11)$$

Assume the following.

$$\forall X0. (l1\_rltopsp1 \ X0) \Rightarrow ((l1\_rlvect\_1 \ X0) \wedge (l1\_pre\_topc \ X0)) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. ((l2\_algstr\_0 \ X0) \wedge (m1\_subset\_1 \ X1 \ (u1\_struct\_0 \ X0))) \Rightarrow (m1\_subset\_1 \ (k4\_algstr\_0 \ X0 \ X1) \ (u1\_struct\_0 \ X0)) \quad (13)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ (u1\_struct\_0 \ (k15\_euclid \ np\_2))) \Rightarrow (m1\_subset\_1 \ (k2\_euclid\_3 \ X0) \ k2\_numbers) \quad (14)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 \ X0) \Rightarrow ((v5\_rltopsp1 \ (k15\_euclid \ X0)) \wedge (l1\_rltopsp1 \ (k15\_euclid \ X0))) \quad (15)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ (u1\_struct\_0 \ (k15\_euclid \ np\_2))) \Rightarrow (k3\_euclid\_3 \ X0 = k1\_comptrig \ (k2\_euclid\_3 \ X0)) \quad (16)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (v1\_xcmplx\_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v6\_membered X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v7\_ordinal1 X1)) \quad (18)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & ((X0 \neq k4\_struct\_0 (k15\_euclid np\_2)) \Rightarrow (((\neg r1\_xxreal\_0 k32\_sin\_cos \\ & (k3\_euclid\_3 X0)) \Rightarrow (k3\_euclid\_3 (k4\_algstr\_0 (k15\_euclid np\_2) \\ & X0) = k7\_real\_1 (k3\_euclid\_3 X0) k32\_sin\_cos)) \wedge ((r1\_xxreal\_0 \\ & k32\_sin\_cos (k3\_euclid\_3 X0)) \Rightarrow (k3\_euclid\_3 (k4\_algstr\_0 (k15\_euclid \\ & np\_2) X0) = k9\_real\_1 (k3\_euclid\_3 X0) k32\_sin\_cos)))) \end{aligned}$$