

## t27\_euclid\_3

(TMJiMN11T3uiQSGRMMPo8VzCnXHoPEptHtR)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  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  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_euclid : \iota \Rightarrow \iota$  be given. Let  $k21\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k3\_euclid\_3 : \iota \Rightarrow \iota$  be given. Let  $k18\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k19\_euclid : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_euclid\_3 : \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_complex1 : \iota$  be given. Let  $k2\_euclid\_3 : \iota \Rightarrow \iota$  be given. Let  $k17\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k1\_comptrig : \iota \Rightarrow \iota$  be given. Let  $k2\_numbers : \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 k1\_numbers) \Rightarrow (k1\_euclid\_3 (k2\_xcmplx\_0 X0 (k3\_xcmplx\_0 X1 k7\_complex1)) = \\ k19\_euclid X0 X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ (k1\_euclid\_3 (k2\_euclid\_3 X0) = X0) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ (k17\_complex1 (k2\_euclid\_3 X0) = k12\_euclid X0) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (X0 = k2\_xcmplx\_0 (k8\_real\_1 (k17\_complex1 \\ X0) (k21\_sin\_cos (k1\_comptrig X0))) (k3\_xcmplx\_0 (k8\_real\_1 ( \\ k17\_complex1 X0) (k18\_sin\_cos (k1\_comptrig X0))) k7\_complex1)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ (m1\_subset\_1 (k2\_euclid\_3 X0) k2\_numbers) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (k3\_euclid\_3 X0 = k1\_comp trig (k2\_euclid\_3 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (v1\_xcmplx\_0 X0) \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k1\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid \\ & np\_2))) \Rightarrow (((X0 = k8\_real\_1 (k12\_euclid X2) (k21\_sin\_cos (k3\_euclid\_3 \\ & X2))) \wedge (X1 = k8\_real\_1 (k12\_euclid X2) (k18\_sin\_cos (k3\_euclid\_3 \\ & X2)))) \Rightarrow (X2 = k19\_euclid X0 X1)))) \end{aligned}$$