

## t11\_euclid\_5

(TMUnGDH5z6WDd1PCrAiKLD9kvj6RJ4Meton)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k4\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k15\_euclid : \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $k4\_euclid\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_euclid\_5 : \iota \Rightarrow \iota$  be given. Let  $k2\_euclid\_5 : \iota \Rightarrow \iota$  be given. Let  $k3\_euclid\_5 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k1\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_numbers) \Rightarrow ((k1\_euclid\_5 \\ & (k4\_euclid\_5 X0 X1 X2) = X0) \wedge ((k2\_euclid\_5 (k4\_euclid\_5 X0 X1 X2) = \\ & X1) \wedge (k3\_euclid\_5 (k4\_euclid\_5 X0 X1 X2) = X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_3))) \Rightarrow \\ & (k4\_algstr\_0 (k15\_euclid np\_3) X0 = k4\_euclid\_5 (k1\_real\_1 (k1\_euclid\_5 \\ & X0)) (k1\_real\_1 (k2\_euclid\_5 X0)) (k1\_real\_1 (k3\_euclid\_5 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1\_xreal\_0 X0) \wedge ((v1\_xreal\_0 \\ & X1) \wedge (v1\_xreal\_0 X2))) \Rightarrow (m1\_subset\_1 (k4\_euclid\_5 X0 X1 X2) (u1\_struct\_0 \\ & (k15\_euclid np\_3))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (4)$$

### Theorem 1

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k1\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_numbers) \Rightarrow (k4\_algstr\_0 \\ & (k15\_euclid np\_3) (k4\_euclid\_5 X0 X1 X2) = k4\_euclid\_5 (k1\_real\_1 \\ & X0) (k1\_real\_1 X1) (k1\_real\_1 X2)))) \end{aligned}$$