

## t42\_euclid

(TMcD7pu3aZjPRbqB8C644xNm8JmbAsA7rco)

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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  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ (k15\_euclid X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 ( \\ k15\_euclid X0))) \Rightarrow (k5\_algstr\_0 (k15\_euclid X0) X1 X2 = k3\_rlvect\_1 \\ (k15\_euclid X0) X1 (k4\_algstr\_0 (k15\_euclid X0) X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ (k15\_euclid X0))) \Rightarrow (k3\_rlvect\_1 (k15\_euclid X0) X1 (k4\_algstr\_0 \\ (k15\_euclid X0) X1) = k4\_struct\_0 (k15\_euclid X0))) \end{aligned} \quad (2)$$

### Theorem 1

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ (k15\_euclid X0))) \Rightarrow (k5\_algstr\_0 (k15\_euclid X0) X1 X1 = k4\_struct\_0 \\ (k15\_euclid X0))) \end{aligned}$$