

t41\_euclid\_4  
(TMV3qj5Denu4mtf4G7XQb5RaemqGaafTTGv)

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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  $k4\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $k2\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m2\_finseq\_2 X1 k1\_numbers \\ & (k1\_euclid X0)) \Rightarrow (\forall X2.(m2\_finseq\_2 X2 k1\_numbers (k1\_euclid \\ & X0)) \Rightarrow ((X1 \in k2\_euclid\_4 X0 X1 X2) \wedge (X2 \in k2\_euclid\_4 X0 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7\_ordinal1 X0) \wedge ((m1\_subset\_1 \\ & X1 (u1\_struct\_0 (k15\_euclid X0))) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 \\ & (k15\_euclid X0)))))) \Rightarrow (k4\_euclid\_4 X0 X1 X2 = k3\_euclid\_4 X0 X1 X2) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & (k15\_euclid X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 ( \\ & k15\_euclid X0))) \Rightarrow (\exists X3.(m2\_finseq\_2 X3 k1\_numbers (k1\_euclid \\ & X0)) \wedge (\exists X4.(m2\_finseq\_2 X4 k1\_numbers (k1\_euclid X0)) \wedge \\ & ((X1 = X3) \wedge ((X2 = X4) \wedge (k2\_euclid\_4 X0 X3 X4 = k3\_euclid\_4 X0 X1 X2))))))) \end{aligned} \quad (3)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & (k15\_euclid X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 ( \\ & k15\_euclid X0))) \Rightarrow ((X1 \in k4\_euclid\_4 X0 X1 X2) \wedge (X2 \in k4\_euclid\_4 \\ & X0 X1 X2)))) \end{aligned}$$