

t31\_euclidlp  
(TMdiEDXathZumVvb3fcK6QhRfWfDZkx3Fc5)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  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  $k8\_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_finseq\_2 X1 X0) \Rightarrow (\forall X2. (m2\_finseq\_2 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (1)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (m2\_finseq\_2 X1 k1\_numbers \\ (k1\_euclid X0)) \Rightarrow (\forall X2. (m2\_finseq\_2 X2 k1\_numbers (k1\_euclid \\ X0)) \Rightarrow (\forall X3. (m2\_finseq\_2 X3 k1\_numbers (k1\_euclid X0)) \Rightarrow \\ (\forall X4. (m2\_finseq\_2 X4 k1\_numbers (k1\_euclid X0)) \Rightarrow (\neg (X1 \in \\ k2\_euclid\_4 X0 X3 X4) \wedge ((X2 \in k2\_euclid\_4 X0 X3 X4) \wedge (\forall X5. ( \\ m1\_subset\_1 X5 k1\_numbers) \Rightarrow (k8\_euclid X0 X1 X2 \neq k9\_euclid X0 (k8\_euclid \\ X0 X3 X4) X5)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$v6\_membered k4\_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (m1\_finseq\_2 (k1\_euclid X0) k1\_numbers) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((v7\_ordinal1 X0) \wedge ((m1\_subset\_1 \\ X1 (k1\_euclid X0)) \wedge (m1\_subset\_1 X2 (k1\_euclid X0)))) \Rightarrow (k2\_euclid\_4 \\ X0 X1 X2 = k2\_euclid\_4 X0 X2 X1) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v7\_ordinal1\ X1)) \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1\ X0\ k5\_numbers)\Rightarrow(\forall X1.(m2\_finseq\_2 \\ & X1\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers \\ & (k1\_euclid\ X0))\Rightarrow(\forall X3.(m2\_finseq\_2\ X3\ k1\_numbers\ (k1\_euclid \\ & X0))\Rightarrow(\forall X4.(m2\_finseq\_2\ X4\ k1\_numbers\ (k1\_euclid\ X0))\Rightarrow \\ & (\neg(X1 \in k2\_euclid\_4\ X0\ X3\ X4)\wedge((X2 \in k2\_euclid\_4\ X0\ X3\ X4)\wedge(\forall X5. \\ & (m1\_subset\_1\ X5\ k1\_numbers)\Rightarrow(k8\_euclid\ X0\ X2\ X1\neq k9\_euclid\ X0\ ( \\ & k8\_euclid\ X0\ X4\ X3)\ X5)))))))) \end{aligned}$$