

t20\_euclidlp  
(TMNs8MuKyrK7f8cTc5AHjpetVNoxTU2ikdf)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $k9\_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(v7\_ordinal1 \\ & X1) \Rightarrow (\forall X2.(m2\_finseq\_2 X2 k1\_numbers (k1\_euclid X1)) \Rightarrow ( \\ & \forall X3.(m2\_finseq\_2 X3 k1\_numbers (k1\_euclid X1)) \Rightarrow (k9\_euclid \\ & X1 (k7\_euclid X1 X2 X3) X0 = k7\_euclid X1 (k9\_euclid X1 X2 X0) (k9\_euclid \\ & X1 X3 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2 X1 X0) \Rightarrow (\forall X2.(m2\_finseq\_2 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \tag{2}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7\_ordinal1 X0) \wedge ((m1\_subset\_1 \\ & X1 (k1\_euclid X0)) \wedge (m1\_subset\_1 X2 (k1\_euclid X0)))) \Rightarrow (m2\_finseq\_2 \\ & (k7\_euclid X0 X1 X2) k1\_numbers (k1\_euclid X0)) \end{aligned} \tag{4}$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \tag{6}$$

**Theorem 1**

$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k5\_numbers) \Rightarrow (\forall X2.(m2\_finseq\_2 X2 k1\_numbers (k1\_euclid X1)) \Rightarrow (\forall X3.(m2\_finseq\_2 X3 k1\_numbers (k1\_euclid X1)) \Rightarrow (\forall X4.(m2\_finseq\_2 X4 k1\_numbers (k1\_euclid X1)) \Rightarrow (k9\_euclid X1 (k7\_euclid X1 (k7\_euclid X1 X2 X3) X4) X0 = k7\_euclid X1 (k7\_euclid X1 (k9\_euclid X1 X2 X0) (k9\_euclid X1 X3 X0)) (k9\_euclid X1 X4 X0))))))$