

# t24\_euclidlp (TMFogZZA- EMAC8CA9BNBuyJxizERUV8w5iS8)

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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  $k7\_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_2 \\ & X1 k1\_numbers (k1\_euclid X0)) \Rightarrow (\forall X2.(m2\_finseq\_2 X2 k1\_numbers \\ & (k1\_euclid X0)) \Rightarrow (\forall X3.(m2\_finseq\_2 X3 k1\_numbers (k1\_euclid \\ & X0)) \Rightarrow (\forall X4.(m2\_finseq\_2 X4 k1\_numbers (k1\_euclid X0)) \Rightarrow \\ & (\forall X5.(m2\_finseq\_2 X5 k1\_numbers (k1\_euclid X0)) \Rightarrow (\forall X6. \\ & (m2\_finseq\_2 X6 k1\_numbers (k1\_euclid X0)) \Rightarrow (k7\_euclid X0 (k7\_euclid \\ & X0 (k7\_euclid X0 X1 X2) X3) (k7\_euclid X0 (k7\_euclid X0 X4 X5) X6) = \\ & k7\_euclid X0 (k7\_euclid X0 (k7\_euclid X0 X1 X4) (k7\_euclid X0 X2 X5)) \\ & (k7\_euclid X0 X3 X6)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2 X1 X0) \Rightarrow (\forall X2.(m2\_finseq\_2 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \quad (5)$$

Assume the following.

$$v3\_membered\ k1\_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0)\wedge((m1\_subset\_1 \\ X1\ (k1\_euclid\ X0))\wedge(v1\_xreal\_0\ X2)))\Rightarrow(m2\_finseq\_2\ (k9\_euclid \\ X0\ X1\ X2)\ k1\_numbers\ (k1\_euclid\ X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(m1\_finseq\_2\ (k1\_euclid\ X0)\ k1\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow \\ (v7\_ordinal1\ X1)) \quad (9)$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow \\ (v1\_xreal\_0\ X1)) \quad (10)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 \\ X1\ k1\_numbers)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k1\_numbers)\Rightarrow(\forall X3. \\ (m1\_subset\_1\ X3\ k1\_numbers)\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ k1\_numbers)\Rightarrow \\ (\forall X5.(m1\_subset\_1\ X5\ k1\_numbers)\Rightarrow(\forall X6.(m1\_subset\_1 \\ X6\ k5\_numbers)\Rightarrow(\forall X7.(m2\_finseq\_2\ X7\ k1\_numbers\ (k1\_euclid \\ X6))\Rightarrow(\forall X8.(m2\_finseq\_2\ X8\ k1\_numbers\ (k1\_euclid\ X6))\Rightarrow \\ (\forall X9.(m2\_finseq\_2\ X9\ k1\_numbers\ (k1\_euclid\ X6))\Rightarrow(k7\_euclid \\ X6\ (k7\_euclid\ X6\ (k7\_euclid\ X6\ (k9\_euclid\ X6\ X7\ X0)\ (k9\_euclid\ X6 \\ X8\ X1))\ (k9\_euclid\ X6\ X9\ X2))\ (k7\_euclid\ X6\ (k7\_euclid\ X6\ (k9\_euclid \\ X6\ X7\ X3)\ (k9\_euclid\ X6\ X8\ X4))\ (k9\_euclid\ X6\ X9\ X5)) = k7\_euclid\ X6 \\ (k7\_euclid\ X6\ (k9\_euclid\ X6\ X7\ (k7\_real\_1\ X0\ X3))\ (k9\_euclid\ X6\ X8 \\ (k7\_real\_1\ X1\ X4))\ (k9\_euclid\ X6\ X9\ (k7\_real\_1\ X2\ X5)))))))))) \end{aligned}$$