

# t79\_euclidlp (TMMVxzcS- FYyo9AWYpMovJnaXNWhaYp1rLN2)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $k1\_euclidlp : \iota \Rightarrow \iota$  be given. Let  $v1\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k2\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_2 \\ & X1 k1\_numbers (k1\_euclid X0)) \Rightarrow (\forall X2.(m2\_finseq\_2 X2 k1\_numbers \\ & (k1\_euclid X0)) \Rightarrow (\forall X3.(m2\_subset\_1 X3 (k1\_zfmisc\_1 (k1\_euclid \\ & X0)) (k1\_euclidlp X0)) \Rightarrow (((X1 \in X3) \wedge (X2 \in X3)) \Rightarrow ((X1 = X2) \vee ((k2\_euclid\_4 \\ & X0 X1 X2 = X3) \wedge (v1\_euclid\_4 X3 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_2 \\ & X1 k1\_numbers (k1\_euclid X0)) \Rightarrow (\forall X2.(m2\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow (\neg(v1\_euclid\_4 X2 X0) \wedge (\forall X3. \\ & (m2\_finseq\_2 X3 k1\_numbers (k1\_euclid X0)) \Rightarrow (\neg(X3 \neq X1) \wedge (X3 \in X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow (\exists X2. \\ & (m2\_finseq\_2 X2 k1\_numbers (k1\_euclid X0)) \wedge (X2 \in X1))) \end{aligned} \quad (3)$$

## Theorem 1

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow (\forall X2. \\ & (m2\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow \\ & (\neg(v1\_euclid\_4 X1 X0) \wedge ((v1\_euclid\_4 X2 X0) \wedge ((X1 \neq X2) \wedge (\forall X3. \\ & (m2\_finseq\_2 X3 k1\_numbers (k1\_euclid X0)) \Rightarrow (\neg(X3 \in X1) \wedge (\neg X3 \in X2)))))))) \end{aligned}$$