

## t106\_euclidlp

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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  $r5\_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_euclidlp : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_euclidlp : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r7\_euclidlp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_euclid\_4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow (\forall X2. \\ & (m2\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow \\ & ((r5\_euclidlp X0 X1 X2) \Rightarrow (r7\_euclidlp X0 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow (\forall X2. \\ & (m2\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow \\ & ((r5\_euclidlp X0 X1 X2) \Rightarrow ((v1\_euclid\_4 X1 X0) \wedge (v1\_euclid\_4 X2 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow (\forall X2. \\ & (m2\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow \\ & (\neg(v1\_euclid\_4 X1 X0) \wedge (\neg(v1\_euclid\_4 X2 X0) \wedge ((r7\_euclidlp X0 X1 \\ & X2) \wedge ((X1 \neq X2) \wedge (\forall X3.(m2\_subset\_1 X3 (k1\_zfmisc\_1 (k1\_euclid \\ & X0)) (k5\_euclidlp X0)) \Rightarrow (\neg(r1\_tarski X1 X3) \wedge ((r1\_tarski X2 X3) \wedge \\ & (v1\_euclidlp X3 X0)))))))))) \end{aligned} \quad (3)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow (\forall X2. \\ & (m2\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_euclid X0)) (k1\_euclidlp X0)) \Rightarrow \\ & (\neg(r5\_euclidlp X0 X1 X2) \wedge ((X1 \neq X2) \wedge (\forall X3.(m2\_subset\_1 X3 \\ & (k1\_zfmisc\_1 (k1\_euclid X0)) (k5\_euclidlp X0)) \Rightarrow (\neg(r1\_tarski \\ & X1 X3) \wedge ((r1\_tarski X2 X3) \wedge (v1\_euclidlp X3 X0)))))))))) \end{aligned}$$